





Ruey J. Sung

Professor of Medicine (Cardiovascular Medicine), Emeritus

 NIH Biosketch available Online

 Curriculum Vitae available Online

 Resume available Online

Bio

BIO

Dr. Ruey Jen Sung is Professor Emeritus, Cardiovascular Medicine, Department of Medicine. Previously, he served as Director, Cardiac Electrophysiology and Arrhythmia Service at Stanford University Medical Center (Chair, Department of Medicine: the late Professor Edward "Ted" D. Harris, Jr)(1991-2001). He graduated from National Taiwan University (1968), completed Medical Residency at University of Wisconsin (Chair: the late Professor Robert F. Schilling)(1970-72) and Cardiology Fellowship, University of Miami (1972-74). Since then, he has devoted his research endeavors to Clinical Cardiac Electrophysiology. He was the first to define the distinct anatomic location of the slow pathway relative to fast pathway conduction in the human atrioventricular (AV) node (1981), the principle of which has provided the basis of selective ablation of slow pathway conduction for curing AV nodal reentrant tachycardia, the most common form of paroxysmal supraventricular tachycardia in humans. Subsequently, he described electrophysiological characteristics of the three different forms of ventricular tachycardia (i.e., reentry, automaticity, and triggered activity), their modes of initiation and termination, and responses to various pharmacological agents in the Clinical Electrophysiology laboratory (1983, 1988). In 1985, he was promoted to full Professor of Medicine in Residence at the University of California at San Francisco (Chair: the late Professor Lloyd "Holly" Smith, Jr)(1981-91). Between 2001 and 2007, he was recruited to the post of Dean, College of Medicine, and Vice-President, National Cheng Kung University, Taiwan. Over the past 40 years, he has authored and co-authored 200 original articles and 66 invited chapters and monographs pertaining to mechanisms and treatment of cardiac rhythm disorders. Additionally, he has co-authored a book with the late Dr. Michael R. Lauer, entitled "Fundamental Approaches to the Management of Cardiac Arrhythmias" (2000, dedicated to his early year mentor, the late Professor Agustin Castellanos, Jr. Notably, Dr. Sung is one of the Founders of the Heart Rhythm Foundation and is currently Fellows of the American College of Physicians, American College of Cardiology, American Heart Association, and Heart Rhythm Society.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Medicine

ADMINISTRATIVE APPOINTMENTS

- Director, Pacemaker-Arrhythmia Clinic and Director, Cardiac Electrophysiology Laboratory, Jackson Memorial Hospital, University of Miami School of Medicine, (1975-1981)
- Director, Clinical Cardiac Electrophysiology Laboratory, H.C. Moffitt Hospital, University of California at San Francisco, (1981-1983)
- Director, Cardiac Electrophysiology, San Francisco General Hospital, University of California at San Francisco, (1983-1991)
- Director, Cardiac Electrophysiology and Arrhythmia Service, Stanford University Medical Center, (1991-2001)
- Director, Center of Biosciences and Biotechnology, National Cheng Kung University, Tainan, Taiwan, (2001-2003)
- Vice-president of the University and Dean, College of Medicine, National Cheng Kung University, Tainan, Taiwan, (2001-2007)

HONORS AND AWARDS

- Eminent Cardiologist Award, Asian-Pacific Heart Association (2013)
- Best paper Award, The 4th CardioRhythm, HongKong (2009)
- Martin H. Stein Memorial Award, Cardiology Fellowship, University of Miami School of Medicine, Miami, Florida (1974)
- Holden Award, Rotating Internship, Bon Secours Hospital, Grosse Pointe, Michigan (1970)
- Best Internship Award, College of Medicine, National Taiwan University (1968)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Fellow and Founders Club, Heart Rhythm Society (2000 - present)
- Fellow, American College of Chest Physicians (1989 - 1995)
- Fellow, Council on Clinical Cardiology, American Heart Association (1977 - present)
- Fellow, American College of Physicians (1977 - present)
- Fellow, American College of cardiology (1976 - present)
- Peer Review Board, UpToDate in Cardiovascular Medicine (2000 - present)
- Editorial Board, Korean Journal of Cardiovascular Diseases (2000 - 2010)
- Editorial Board, Journal of American College of Cardiology (2000 - 2004)
- Editorial Board, Journal of Interventional Cardiac Electrophysiology (1997 - 2003)
- Editorial Board, Journal of Formosan Medical Society (1994 - 2007)
- Editorial Board, Cardiovascular Drugs and Therapy (1994 - 2001)
- Editorial Board, Journal of Cardiovascular Electrophysiology (1991 - 1999)
- Editorial Board, American Heart Journal (1991 - 1996)
- Editorial Board, Clinical Progress in Pacing and Electrophysiology (1981 - 1989)

PROFESSIONAL EDUCATION

- MD, College of Medicine, National Taiwan University Taipei, Taiwan , Medicine (1968)

COMMUNITY AND INTERNATIONAL WORK

- Board Member, Wuhan, P.R. China
- Chair, Scientific Committee, Taipei, Taiwan
- Chair, Research Committee, Taiwan

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Clinical and basic cardiac electrophysiology

Publications

PUBLICATIONS

- **Targeting intracellular calcium cycling in catecholaminergic polymorphic ventricular tachycardia: a theoretical investigation** *AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY*
Sung, R. J., Lo, C., Hsiao, P. Y., Tien, H.
2011; 301 (4): H1625-H1638

- **Electrophysiological mechanisms of ventricular arrhythmias in relation to Andersen-Tawil syndrome under conditions of reduced I-K1: a simulation study** *AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY*
Sung, R. J., Wu, S., Wu, J., Chang, H., Luo, C.
2006; 291 (6): H2597-H2605
- **Significance of inducible ventricular flutter/fibrillation in risk stratification in patients with coronary artery disease** *INTERNATIONAL JOURNAL OF CARDIOLOGY*
Matsushita, T., Chun, S., Liem, L. B., Friday, K. J., Sung, R. J.
2004; 94 (1): 67-71
- **Spatial heterogeneity of action potential alternans during global ischemia in the rabbit heart** *AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY*
Qian, Y. W., Sung, R. J., Lin, S. F., Province, R., Clusin, W. T.
2003; 285 (6): H2722-H2733
- **Facilitating electrical cardioversion of persistent atrial fibrillation by antiarrhythmic drugs: update on clinical trial results.** *Cardiac electrophysiology review*
Sung, R. J.
2003; 7 (3): 300-303
- **Limited predictive value of inducible sustained ventricular tachycardia for future occurrence of spontaneous ventricular tachycardia in patients with coronary artery disease and relatively preserved cardiac function** *JOURNAL OF ELECTROCARDIOLOGY*
Matsushita, T., Chun, S., Liem, L. B., Friday, K. J., Sung, R. J.
2003; 36 (3): 205-211
- **Unidirectional conduction block at cavotricuspid isthmus created by radiofrequency catheter ablation in patients with typical atrial flutter** *JOURNAL OF CARDIOVASCULAR ELECTROPHYSIOLOGY*
Matsushita, T., Chun, S., Liem, L. B., Friday, K. J., Sung, R. J.
2002; 13 (11): 1098-1102
- **Importance of using standard rather than torso surface electrocardiographic leads for pacemapping at the right ventricular outflow tract** *PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY*
Matsushita, T., Chun, S., Chan, N. Y., Glatter, K., Sung, R. J.
2002; 25 (5): 776-784
- **Spatial heterogeneity of calcium transient alternans during the early phase of myocardial ischemia in the blood-perfused rabbit heart** *CIRCULATION*
Qian, Y. W., Clusin, W. T., Lin, S. F., Han, J., Sung, R. J.
2001; 104 (17): 2082-2087
- **Influence of isoproterenol on the accelerated junctional rhythm observed during radiofrequency catheter ablation of atrioventricular nodal slow pathway conduction** *AMERICAN HEART JOURNAL*
Matsushita, T., Chun, S., Sung, R. J.
2001; 142 (4): 664-668
- **Electrophysiologic characteristics of ventricular extrastimulation-induced dissipation of functional bundle branch block associated with supraventricular tachycardia** *JOURNAL OF CARDIOVASCULAR ELECTROPHYSIOLOGY*
Wang, S. H., Han, J., Hou, C., Sung, R. J.
2001; 12 (8): 928-934
- **Antiarrhythmic agents in facilitating electrical cardioversion of atrial fibrillation and promoting maintenance of sinus rhythm** *CARDIOLOGY*
Marcus, G. M., Sung, R. J.
2001; 95 (1): 1-8
- **Effects of adenosine A(1)-receptor activation on torsade de pointes in rabbits** *CARDIOVASCULAR DRUGS AND THERAPY*
Tan, H. L., Hou, C. J., Sung, R. J.
1999; 13 (5): 441-447
- **Multiple atrioventricular nodal pathways in humans: Electrophysiologic demonstration and characterization** *JOURNAL OF CARDIOVASCULAR ELECTROPHYSIOLOGY*

- Lee, K. L., Chun, H. M., Liem, L. B., Lauer, M. R., Young, C., Sung, R. J.
1998; 9 (2): 129-140
- **The role of intravenous amiodarone in the management of cardiac arrhythmias** *ANNALS OF INTERNAL MEDICINE*
Desai, A. D., Chun, S., Sung, R. J.
1997; 127 (4): 294-303
 - **Intracoronary arterial occlusion: a novel technique potentially useful for ablation of cardiac arrhythmias.** *Journal of interventional cardiac electrophysiology*
Hsia, T. Y., Billingham, M., Sung, R. J.
1997; 1 (1): 7-14
 - **Clinical efficacy of propantheline bromide in neurocardiogenic syncope: Pharmacodynamic implications** *67th Scientific Session of the American-Heart-Association*
YU, J. C., Sung, R. J.
SPRINGER.1997: 687-92
 - **Ventricular pacing threshold and refractoriness after defibrillation shocks in patients with implantable cardioverter-defibrillators** *AMERICAN HEART JOURNAL*
YU, J. C., Lauer, M. R., Young, C., Liem, L. B., Peterson, J., Ottoboni, L., Sung, R. J.
1996; 131 (6): 1121-1126
 - **Correlation of p-wave polarity with underlying electrophysiologic mechanisms of long RP' tachycardia** *AMERICAN JOURNAL OF CARDIOLOGY*
Ng, K. S., Lauer, M. R., Young, C., Liem, L. B., Sung, R. J.
1996; 77 (12): 1129-?
 - **Spectrum of electrophysiologic and electropharmacologic characteristics of verapamil-sensitive ventricular tachycardia in patients without structural heart disease** *AMERICAN JOURNAL OF CARDIOLOGY*
Lee, K. L., Lauer, M. R., Young, C., Lai, W. T., Tai, Y. T., Chun, H., Liem, L. B., Sung, R. J.
1996; 77 (11): 967-973
 - **Localization of the origin of the atrioventricular junctional rhythm induced during selective ablation of slow-pathway conduction in patients with atrioventricular node reentrant tachycardia** *AMERICAN HEART JOURNAL*
YU, J. C., Lauer, M. R., Young, C., Liem, L. B., Hou, C., Sung, R. J.
1996; 131 (5): 937-946
 - **Characteristic electrocardiographic features of manifest left anterior paraseptal accessory atrioventricular connection** *AMERICAN HEART JOURNAL*
Lee, K. L., Lauer, M. R., Young, C., Chun, H., Liem, L. B., Sung, R. J.
1996; 131 (4): 814-818
 - **Role of atrial extrastimulation in the diagnosis of atrioventricular node reentrant tachycardia with antegrade atrioventricular conduction via bystander accessory connection** *AMERICAN HEART JOURNAL*
Kuo, C. T., Lauer, M. R., Young, C., Hou, C. J., Liem, L. B., Yu, J., Sung, R. J.
1996; 131 (4): 839-842
 - **Electrophysiologic significance of discrete slow potentials in dual atrioventricular node physiology: Implications for selective radiofrequency ablation of slow pathway conduction** *AMERICAN HEART JOURNAL*
Kuo, C. T., Lauer, M. R., Young, C., Hou, C. J., Liem, L. B., Yu, J., Sung, R. J.
1996; 131 (3): 490-498
 - **DETERMINATION OF VENTRICULAR VULNERABLE PERIOD AND VENTRICULAR-FIBRILLATION THRESHOLD BY USE OF T-WAVE SHOCKS IN PATIENTS UNDERGOING IMPLANTATION OF CARIOVERTER/DEFIBRILIATORS** *CIRCULATION*
Hou, C. J., CHANGSING, P., Flynn, E., Martinez, L., Peterson, J., OTTOBONI, L. K., Liem, L. B., Sung, R. J.
1995; 92 (9): 2558-2564
 - **SUPRAVENTRICULAR TACHYARRHYTHMIAS - PHARMACOLOGICAL VERSUS NONPHARMACOLOGIC APPROACHES** *MEDICAL CLINICS OF NORTH AMERICA*
Chun, H. M., Sung, R. J.
1995; 79 (5): 1121-?

- **ELECTROPHYSIOLOGIC MECHANISMS OF THE LONG QT INTERVAL SYNDROMES AND TORSADE-DE-POINTES** *ANNALS OF INTERNAL MEDICINE*
Tan, H. L., Hou, C. J., Lauer, M. R., Sung, R. J.
1995; 122 (9): 701-714
- **LOW-DOSE AMIODARONE SHOULD NOT BE THE FIRST-LINE TREATMENT FOR ATRIAL-FIBRILLATION** *CARDIOVASCULAR DRUGS AND THERAPY*
Sung, R. J.
1994; 8 (5): 773-774
- **ATRIOVENTRICULAR NODE REENTRY - CURRENT CONCEPTS AND NEW PERSPECTIVES** *PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY*
Sung, R. J., Lauer, M. R., Chun, H.
1994; 17 (8): 1413-1430
- **VENTRICULAR-FIBRILLATION INDUCED BY LOW-ENERGY SHOCKS FROM PROGRAMMABLE IMPLANTABLE CARDIOVERTER-DEFIBRILLATORS IN PATIENTS WITH CORONARY-ARTERY DISEASE** *AMERICAN JOURNAL OF CARDIOLOGY*
Lauer, M. R., Young, C., Liem, L. B., Ottoboni, L., Peterson, J., Goold, P., Sung, R. J.
1994; 73 (8): 559-563
- **EFFICACY OF ADENOSINE IN TERMINATING CATECHOLAMINE-DEPENDENT SUPRAVENTRICULAR TACHYCARDIA** *AMERICAN JOURNAL OF CARDIOLOGY*
Lauer, M. R., Young, C., Liem, L. B., Sung, R. J.
1994; 73 (1): 38-42
- **A CHARACTERISTIC ELECTROCARDIOGRAPHIC PATTERN INDICATIVE OF MANIFEST LEFT-SIDED POSTERIOR SEPTAL PARASEPTAL ACCESSORY ATRIOVENTRICULAR CONNECTIONS** *AMERICAN JOURNAL OF CARDIOLOGY*
Young, C., Lauer, M. R., Liem, L. B., Sung, R. J.
1993; 72 (5): 471-475