

## **CURRICULUM VITAE**

**Name:** George Cooper, IV, M.D.

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Medical University of South Carolina  
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Charleston, South Carolina 29403

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**Fax:** (843) 876-5068  
**E-Mail:** cooperge@musc.edu

**Education:**

1960	Graduate, The Episcopal High School, Alexandria, Virginia
1964	B.A., Williams College, Williamstown, Massachusetts
1968	M.D., Cornell University Medical College, New York, NY

### **Post-Graduate Education:**

1968-69	Intern in Medicine, University Hospitals, Cleveland, Ohio
1969-70	Assistant Resident in Medicine, University Hospitals, Cleveland, Ohio
1970-71	Senior Assistant Resident in Medicine, University Hospitals, Cleveland, Ohio
1969-71	Teaching Fellow in Medicine, University Hospitals, Cleveland, Ohio
1971-73	Research Fellow, Department of Physiology, Mayo Clinic, Rochester, Minnesota
1973-75	Cardiology Fellow, Duke University Medical Center, Durham, North Carolina

### **Military Service:**

1975-76	Research Investigator Division of Biophysics, Naval Medical Research Institute Bethesda, Maryland
1976-77	Head, Division of Physiology Naval Medical Research Institute Bethesda, Maryland

**Academic Appointments:**

1977-81 Assistant Professor of Internal Medicine,  
University of Iowa College of Medicine, Iowa City, Iowa

1981-85 Associate Professor of Internal Medicine and Physiology  
Director of Basic Cardiovascular Research  
Temple University School of Medicine,  
Philadelphia, Pennsylvania

1985- Professor of Internal Medicine and Physiology  
and Member of the Graduate Faculty  
and the Molecular and Cellular Biology Faculty  
Director of Cardiovascular Research  
Medical University of South Carolina  
Chief of Cardiology  
V A Medical Center, Charleston, South Carolina

1987- Adjunct Professor of Bioengineering  
Clemson University, Clemson, South Carolina

1994- Professor of Pediatrics (Division of Pediatric Cardiology)  
Medical University of South Carolina

1994- Director, Gazes Cardiac Research Institute  
(<http://www.musc.edu/gazes/>)  
Medical University of South Carolina

2004- Distinguished University Professor  
Medical University of South Carolina

2009- Gazes Chair in Cardiac Research  
Medical University of South Carolina

**Certification:**

1972 American Board of Internal Medicine - #38372

**State Licensure:**

02/20/86 South Carolina - #12689

**Professional Affiliations:**

1972- American Federation for Clinical Research

1977- American Heart Association

1977 Iowa Heart Association (Member, Research Committee)

1978- Fellow, Council on Circulation, American Heart Association  
(Member, Executive Committee, 1988 - 1992)  
(Member, Nominating Committee, 1989 - 1991)  
(Judge, Young Investigators Awards Competition, 1989)  
(Delegate, AHA Assembly, 1991 - 1993)  
(Member, Budget Committee, 1991 - 1993)

1979- Fellow, Council on Basic Science, American Heart Assoc.  
(Member, Executive Committee, 1979 - 1982)

1979- Central Society for Clinical Research

1979- Circulation Group, American Physiological Society

1979- Cardiac Muscle Society, American Physiological Society

1981- American Physiological Society (Cardiovascular Section)  
(Member, Steering Committee, 1998 - )  
(Chairman, Awards Committee, 1998 - 01, 2006 - 2009)  
(Chairman NHLBI Liason Committee, 2001 - 2005)

1981- International Society for Heart Research  
1984 Penn. Heart Association (Member, Research Committee)  
1984- Biophysical Society  
1985- American Association for the Advancement of Science  
1986- The New York Academy of Sciences  
1986- The Protein Society  
1987- S. C. Heart Association (Member, Research Committee)  
1988- Association of University Cardiologists  
1989- Society for the Relief of Widows and Orphans, Charleston, SC  
1990- Society for Advanced Drug Research in Heart and  
Vascular Disease (Member, International Advisory Board)

1992- American Men and Women of Science  
1994- Association of American Physicians  
1995- Who's Who in America (Science and Engineering)  
1996- Fellow, Molecular Medicine Society  
2001- Fellow, Council on Basic Cardiovascular Sciences  
American Heart Association

**Professional Activities:**

1981 Consultant for the National Heart, Lung, and Blood Institute  
1982 Ad Hoc Reviewer for the Cardiovascular and Pulmonary  
Study Section of the N. H. L. B. I.

1982 Abstract reviewer, American Heart Association  
1982 Grand Rounds, Thomas Jefferson Hosp., Philadelphia, PA  
1983 Consultant for the N. H. L. B. I., Site visit  
1983 Abstract reviewer, American Heart Association  
1983 Dean's Task Force on Pharmacodynamics, Temple  
University Medical School  
1983 Research Committee, Temple University Medical School  
1983 Grand Rounds, Presbyterian Hospital, San Francisco, CA  
1984 Symposium Participant: Muscle Energetics. University  
of Vermont, Burlington, VT

1984 Freshman Cardiovascular Physiology Course Lecturer,  
Temple University Medical School  
1984 Sophomore Cardiovascular Systems Disease Course  
Lecturer, Temple University Medical School  
1984 Dean's Committee on Research Instrumentation, Temple  
University Medical School  
1984 Consultant for the N. H. L. B. I., Site Visit,  
University of Alabama

1985 Grand Rounds, Likoff Cardiovascular Institute,  
Philadelphia, PA  
1985 Reviewer for the N. H. L. B. I., Physician Scientist Awards  
1985 Grand Rounds, Temple University Medical School  
1985 Nominating Committee for National Societies, Temple  
University Medical School  
1985 Promotions and Tenure Committee, Dept. of Medicine,  
Temple University Medical School

- 1985 Advisory Committee for the General Clinical Research Center, Temple University Medical School
- 1986 Guest speaker, Fifth Annual Orgain Symposium, Duke University Medical Center
- 1986 Dept. of Medicine Research Development Committee, Medical University of South Carolina
- 1986 Consultant for NIH Specialized Centers of Research in Ischemic Heart Disease
- 1986 Research Committee, Medical University of South Carolina
- 1987 Library Research Collection Advisory Committee, Medical University of South Carolina
- 1987 Grand Rounds, Medical University of South Carolina
- 1987 Research Committee, Charleston VA Medical Center
- 1987 Search Committee for Pathology Chairman, Medical University of South Carolina
- 1987 Honorary Degree Committee, Medical University of South Carolina
- 1987 Grand Rounds, Beth Israel Hospital, Harvard University
- 1987 Steering Committee, M.D. - Ph.D. Medical Scientist Training Program, Medical University of South Carolina
- 1987 Clinical Executive Board, Charleston VA Medical Center
- 1987 Invited Lecture, Cardiovascular Research Institute, University of California at San Francisco
- 1988 Invited Speaker and Session Chairman, ISHR Symposium on Cardiac Hypertrophy, Tokyo, Japan
- 1988 Invited Speaker and Session Chairman, AHA Conference on Cardiac Hypertrophy, Big Sky, Montana
- 1988 Consultant for the N. I. H. Clinical Sciences Study Section
- 1988 Chairman, Graduate College Postdoctoral Fellowship Committee, Medical University of South Carolina
- 1989 Research Council, Medical University of South Carolina
- 1989 Chairman, Shared Instrumentation Committee, Medical University of South Carolina
- 1989 Consultant for the N. I. H. Experimental Cardiovascular Sciences Study Section
- 1989 Program Co-Director, American College of Cardiology Course on Cardiology for the Primary Physician
- 1989 Invited Lecture, British Society for Cardiovascular Research at Oxford University, Oxford, England
- 1990 Program Developer, Joint Medical School Research Conference, Medical Univ. of S.C. and Univ. of S.C.
- 1990 Consultant for the N. I. H. Cardiovascular and Renal and Experimental Cardiovascular Sciences Study Sections
- 1990 Chairman of the Session on "Cellular Metabolism and Cardiac Injury," American College of Cardiology Annual Scientific Session, New Orleans, Louisiana
- 1990 Executive Committee of the Research Council, Medical University of South Carolina
- 1990 Program Co-Director, American College of Cardiology Course on Cardiology for the Primary Physician
- 1990 External Reviewer for the Program Project Grant on "Myocardial and Vascular Factors in Heart Failure" in the Cardiology Division at the University of Minnesota

- 1990 Chairman of the Session on “Energetics and Cardiac Function,” American Heart Association's 63<sup>rd</sup> Annual Scientific Sessions, Dallas, Texas.
- 1990 Invited Lecture, “Load Induction of Cardiac Hypertrophy,” Plenary Session of the American Heart Association's 63<sup>rd</sup> Annual Meeting, Dallas, Texas.
- 1990 Invited Lecture, Department of Physiology, University of Calgary Health Sciences Center, Calgary, Canada
- 1991 Steering Committee for the American Board of Internal Medicine Clinical Investigator Pathway
- 1991 Health Sciences Foundation Developing Scholars Committee, Medical University of South Carolina
- 1992 Chairman of the Session on “Consequences of Altered Gene Expression,” International Symposium on the Physiology of Diastole, Palm Beach, Florida
- 1992 Chairman of an ad hoc review group for the N. I. H. Cardiovascular and Pulmonary Study Section
- 1992 Grand Rounds, Beth Israel Hospital, Harvard University
- 1992 Grand Rounds, Brigham and Womens Hospital, Harvard University
- 1992 Consultant for the N. I. H. Cardiovascular Study Section
- 1992 Chairman of the Health Sciences Foundation Developing Scholars Committee, Medical University of S.C.
- 1992 Invited Lecture, Weis Center For Research, Geisinger Clinic, Danville, Pennsylvania
- 1993 Graduate School Cell Biology Course Lecturer, Medical University of South Carolina
- 1993 Invited Lecture, American College of Cardiology Annual Meeting, Anaheim, California
- 1993 Invited Lecture, European Society of Cardiology Working Group on Cellular Biology of the Heart, Nice, France
- 1993 Invited Lecture, Canadian Medical Advisory Council
- 1993 Search Committee for Director of Research, Medical University of South Carolina
- 1993 Invited Lecture, “Role of the Intracellular Cytoskeleton in Cardiac Hypertrophy,” Plenary Session of the American Heart Association's 66<sup>th</sup> Annual Meeting, Atlanta, Georgia
- 1993 Grand Rounds, Beth Israel Hospital, Harvard University
- 1994 Organizer and Chairman of the FASEB Symposium on “Mechanisms of Contractile Dysfunction of the Hypertrophied Cardiocyte,” Anaheim, California
- 1994 Invited Lecture, “Advances in Molecular Biology of Cardiac Hypertrophy,” International Society for Heart Research, London, Ontario, Canada
- 1994 Invited Lecture, “Endogenous Mediators in the Development and Progression of Cardiovascular Diseases,” American College of Cardiology Annual Meeting, Atlanta, Georgia
- 1994 Cardiovascular Center Distinguished Lecturer, University of Cincinnati College of Medicine, Cincinnati, Ohio
- 1994 Grand Rounds, Brigham & Women’s Hospital, Harvard University
- 1994 Grand Rounds, Heart and Vascular Institute, Henry Ford Hospital

- 1994 Invited Lecture, American Physiological Society Conference on Mechanotransduction and the Regulation of Growth and Differentiation, Sarasota, Florida
- 1994 George E. Brown Memorial Lecture, American Heart Association's 67<sup>th</sup> Annual Meeting, Dallas, Texas
- 1995 Burton Tabakin Memorial Lecture, College of Medicine, University of Vermont
- 1995 Grand Rounds, Department of Medicine, University of Vermont College of Medicine
- 1995 Invited Lecture, Dept. of Physiology, Michigan State Univ.
- 1995 Working Group for the Strategic Plan, Medical University of South Carolina
- 1995 Invited Lecture, Otto Frank Symposium on Cardiac Hypertrophy and Regression, Munich, Germany
- 1995 Invited Lecture, 15<sup>th</sup> Meeting of the International Society for Heart Research, Prague, Czech Republic
- 1995 Chairman of the Session on "Cardiac Hypertrophy," 15<sup>th</sup> Meeting of the International Society for Heart Research, Prague, Czech Republic
- 1995 Invited Lecture, Department of Medicine, University of Texas Health Science Center at San Antonio
- 1995 Invited Lecture, Weis Center For Research, Geisinger Clinic, Danville, Pennsylvania
- 1995 Invited Lecture, NASA International Workshop on Cardiovascular Research in Space, Dallas, Texas
- 1995 Invited Lecture, Bristol-Myers Squibb, Princeton, New Jersey
- 1995 Invited Lecture, Glaxo Research & Development, Paris, France
- 1995 Consultant for Medical Research Council, United Kingdom
- 1995 Invited Lecture, Department of Medicine, University of Rochester Medical Center, Rochester, New York
- 1995 Invited Lecture, Department of Medicine, University of Connecticut Medical Center, Farmington Connecticut
- 1995 Invited Lecture, Allegheny-Singer Research Institute, Pittsburg, Pennsylvania
- 1996 Chairman of the Session on "Molecular Analysis of Left Ventricular Hypertrophy and Remodeling," American College of Cardiology's 45<sup>th</sup> Annual Scientific Session, Orlando, Florida.
- 1996 Invited Lecture, Merck and Co., West Point, Pennsylvania
- 1996 Invited Lecture, Department of Medicine, New York Medical College, New York, New York
- 1996 Invited Lecture & Session Chairman, AHA Conference on the Molecular Biology of the Normal, Hypertrophied, and Failing Heart, Snowbird, Utah
- 1996 Invited Lecture, Department of Medicine, University of Oregon Health Sciences Center, Portland, Oregon
- 1996 Invited Lecture, Carl Ludwig Symposium on Growth Factors and Cardiac Hypertrophy, Leipzig, Germany
- 1996 Chairman of the Session on "Function of the Hypertrophic and Failing Heart," American Heart Association's 69<sup>th</sup> Annual Scientific Sessions, New Orleans, Louisiana.
- 1997- Abstract reviewer, American Heart Association

1998	Invited Lecture, Johnson Research Institute, Mayo Clinic, Scottsdale, Arizona
1998	Invited Lecture, Heart Failure Society, Boca Raton, Florida
1998	Invited Lecture, Third International Symposium on Heart Failure, Bühlerhöhe, Germany
1998	Invited Lecture, Symposium on New Frontiers in Heart Failure Research, Key Biscayne, Florida
1999	Invited Lecture & Session Chairman, AHA Conference on Molecular, Cellular, & Integrated Physiological Approaches to the Failing Heart, Snowbird, Utah
1999	Grand Rounds, Department of Medicine, Case Western Reserve School of Medicine
2000	State-of-the-Art Lecture, American College of Cardiology National Meeting, Anaheim California
2000	Johnson McGuire Visiting Professor, University of Cincinnati College of Medicine
2000	Invited Lecture, Heart Failure Society, Boca Raton, Florida
2000	Invited Lecture, American Heart Association's 73 <sup>rd</sup> Annual Scientific Sessions, New Orleans, Louisiana
2000	Chairman of the Session on "Cytoskeleton and Extracellular Matrix," American Heart Association's 73 <sup>rd</sup> Annual Scientific Sessions, New Orleans, Louisiana.
2001	Chairman of the Session on "Extracellular Matrix and Remodeling in Heart Failure," 5 <sup>th</sup> Annual Scientific Meeting, Heart Failure Society, Washington, D.C.
2002	Invited Lecture, AHA Conference on the Molecular Biology of the Normal, Hypertrophied, and Failing Heart, Snowbird, Utah
2002	Chairman, Search Committee for the Associate Chief of Staff for Research, Medical University of South Carolina
2003	Basic Science Committee of the MUSC Heart and Vascular Board

**Editorial Consultant:**

1974-	<i>Circulation</i>
1978-	<i>American Journal of Physiology: Heart and Circulatory Physiology</i>
1979-	<i>Journal of Pharmacology and Experimental Therapeutics</i>
1979-	<i>Journal of Laboratory and Clinical Medicine</i>
1980-	<i>Hypertension</i>
1981-	<i>Circulation Research</i>
1984-	<i>Journal of Clinical Investigation</i>
1987-	<i>Canadian Journal of Physiology and Pharmacology</i>
1990-	<i>Journal of Molecular and Cellular Cardiology</i>
1991-	<i>FASEB Journal</i>
1991-	<i>Science</i>
1992-	<i>Journal of Applied Physiology</i>
1992-	<i>American Journal of Cardiology</i>
1993-	<i>Journal of Investigative Surgery</i>
1993-	<i>American Journal of Physiology: Cell Physiology</i>
1993-	<i>Journal of Cardiovascular Pharmacology</i>
1996-	<i>Molecular and Cellular Biochemistry</i>
1997-	<i>Cardiovascular Research</i>
1998-	<i>Molecular Medicine</i>
1999-	<i>Neurochemical Research</i>

1999- *American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology*  
 2006- *Cell Motility and the Cytoskeleton*

**Editorial Boards:**

1985- *Heart Failure*, Editorial Board  
 1984-87 *Circulation Research*, Editorial Board, 1<sup>st</sup> Term  
 1987-90 *Circulation Research*, Editorial Board, 2<sup>nd</sup> Term  
 1993- *Journal of Cardiac Failure*, Editorial Board  
 1993- *Hypertension Research*, Editorial Board  
 1994-96 *Circulation Research*, Editorial Board, 3<sup>rd</sup> Term  
 1996-00 *Circulation Research*, Editorial Board, 4<sup>th</sup> Term  
 1996- *Journal of Clinical Investigation*, Guest Editor  
 1997- *Heart and Vessels*, Editorial Board  
 1999- *Journal of Molecular and Cellular Cardiology*, Editorial Board  
 2004- *American Journal of Physiology: Heart and Circulatory Physiology*, Editorial Board  
 2008- *Open Heart Failure Journal*, Editorial Board  
 2008- *Cell Health and Cytoskeleton*, Editorial Board

**Study Sections:**

1988-91 Cardiovascular Physiology and Pathophysiology Study Section, American Heart Association  
 1989-93 Chairman, V. A. National Medical Research Service Merit Review Appeals Board Study Section  
 1993- Advisory Panel on Heart Failure, National Institute on Aging  
 2001-03 NIH Cardiovascular Sciences IRS Study Section  
 2005 NIH PPG Study Section

**Honors and Awards:**

1963-65 Ford Foundation Student Research Grant, Williams College  
 1968 Charles L. Horn Scholarship Award, Cornell University Medical College  
 1971-73 Fellow, Minnesota Heart Association  
 1971-75 Recipient, USPHS Advanced Training Grant in Medicine  
 1973 Elton Hoyt Memorial Award for Clinical Research, Case Western Reserve University  
 1973 Young Investigator Award Competition, American College of Cardiology, Second Prize  
 1975 Louis N. Katz Basic Science Research Prize, American Heart Association, Honorable Mention  
 1978-81 Research Associate, Veterans Administration  
 1985 American Society for Clinical Investigation  
 1986-90 National Program Specialist in Cardiology for the Veterans Administration Medical System  
 1988-93 Clinical Investigator, Veterans Administration  
 1993 Horace Smithy Award, South Carolina Heart Association  
 1994 Association of American Physicians  
 1994 George E. Brown Memorial Award, Council on Circulation, American Heart Association

1995	Burton Tabakin Lectureship, University of Vermont College of Medicine
2000	Johnson McGuire Visiting Professorship, University of Cincinnati College of Medicine
2004	Carl J. Wiggers Award, Cardiovascular Section, American Physiological Society
2004	Veterans Administration Henry M. Middleton Research Excellence Award (VISN 7)
2004-	Distinguished University Professor Medical University of South Carolina
2009-	Gazes Chair in Cardiac Research Medical University of South Carolina

**Classroom Teaching:**

1982-85	Physiology, Medical School, Temple University
1992-	Foundations II: Cell Biology, Graduate School, Medical University of South Carolina
2002-	Cardiovascular Structure and Function, Molecular and Cellular Biology and Pathobiology Program, Graduate School, Medical University of South Carolina

**Doctoral Degrees Supervised:**

1981	Ines K. Lauva, Department of Anatomy, University of Iowa, Thesis Committee
1981	Roger D. Wangler, Department of Anatomy, University of Iowa, Thesis Committee
1984	Vuong Duthinh, Department of Physiology, Temple University, Thesis Committee
1984	William H. duBell, Department of Physiology, Temple University, Thesis Supervisor
1987-90	Bruce Parsons, Bioengineering Alliance of South Carolina (Clemson University and Medical University of South Carolina), Thesis Supervisor
1988-90	Timothy Y. Maines, Department of Physiology, Medical University of South Carolina, Thesis Supervisor
1989-91	John Rozich, Molecular Biology Program, Medical University of South Carolina, Thesis Supervisor
1989-91	Terrie Dantsler-Whitworth, Molecular Biology Program Medical University of South Carolina, Thesis Committee
1989-92	Anne Gamble, Molecular Biology Program, Medical University of South Carolina, Thesis Committee
1989-92	Ronald Peterson, Molecular Biology Program, Medical University of South Carolina, Thesis Committee
1990-93	Charles Ivester, Departments of Medicine and Physiology, M.D. - Ph.D. Candidate, Medical University of South Carolina, Thesis Supervisor
1993-95	Mary Durando, Department of Physiology, Medical University of South Carolina, Thesis Supervisor
1993-96	Kendrick Richardson, Bioengineering Alliance of South Carolina (Clemson University and Medical University of South Carolina), Thesis Supervisor

1993-00	Kristie Beaton, Molecular Biology Program, M.D. - Ph.D. Candidate, Medical University of South Carolina, Thesis Supervisor
1994-	James Tuxworth, Department of Physiology, Medical University of South Carolina, Thesis Committee
1994-98	Kim Barnes, Molecular Biology Program, M.D. - Ph.D. Candidate, Medical University of South Carolina, Thesis Committee
1994-98	Tony Makhlof, Molecular Biology Program, M.D. - Ph.D. Candidate, Medical University of South Carolina, Thesis Committee
1996-00	Vijay Kasi, Molecular Biology Program, Ph.D. Candidate, Medical University of South Carolina, Thesis Committee
1997-00	Jason Stroud, Bioengineering Alliance of South Carolina (Clemson University and Medical University of South Carolina), Thesis Supervisor
1998-01	Chris Willey, Molecular Biology Program, M.D. - Ph.D. Candidate, Medical University of South Carolina, Thesis Committee
2001-03	Marie Elizabeth Neilsen, Molecular Biology Program, Ph.D. Candidate, Medical University of South Carolina, Thesis Supervisor
2003-	Anandakumar Shunmugavel, Molecular Biology Program, Ph.D. Candidate, Medical University of South Carolina, Thesis Supervisor

**Post-Doctoral Fellows Supervised:**

1981-83	Robert L. Kent, Ph.D., Department of Pharmacology, Temple University Presently: Associate Professor of Medicine and Pharmacology, Medical University of South Carolina
1981-84	Cornelius E. Uboh, Ph.D., Department of Pharmacology, Temple University Presently: Pharmaceutical Industry
1982-83	Thomas Wisenbaugh, M.D., Dept. of Medicine, Temple University Presently: Associate Professor of Medicine at the University of Witwatersrand, Johannesburg, South Africa
1982-84	Ed W. Thompson, Ph.D., Department of Anatomy, Temple University Presently: Associate Professor of Anatomy at the Hormel Institute of the University of Minnesota
1982-84	Lewis H. Silver, Ph.D., Department of Physiology, Temple University Presently: Pharmaceutical Industry
1984-85	Pamela R. Gordon, M.D., Department of Medicine, Temple University Presently: Associate Professor of Medicine at Wayne State
1985-86	Hali Hartman, Ph.D., Department of Pharmacology, Temple University. Presently: Pharmaceutical Industry
1985-86	Douglas L. Mann, M.D., Department of Medicine, Temple University Presently: Associate Professor of Medicine and Chief of Cardiology, V A Medical Center, Baylor University
1986-90	Adrian Van Bakel, M.D., Ph.D., Department of Medicine, Medical University of South Carolina Presently: Associate Professor of Medicine (Cardiology) at the Medical University of South Carolina

- 1987-89 Margaret M. Kelly, Ph.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Instructor in the Department of Pharmacology,  
Medical University of South Carolina
- 1987-89 Heidemarie Ernst, Ph.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Instructor in the Department of Biochemistry,  
Medical University of South Carolina
- 1986-92 John Rozich, M.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Assistant Professor of Medicine  
(Cardiology) at the Medical University of South Carolina
- 1989-92 Patrick McCollam, Ph.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Assistant Professor of Pharmaceutical  
Sciences at the Medical University of South Carolina
- 1989-93 Linda G. Jones, Ph.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Assistant Professor of Medicine at the  
University of Arkansas
- 1994-96 John Thornton, M.D., Ph.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Resident in Medicine at the University of  
Alabama
- 1993-99 Gregg T. Schuyler, M.D., Ph.D., Department of Medicine,  
Medical University of South Carolina  
Presently: Private practice
- 1997-02 Guangmao Cheng, M.D., Ph.D., Department of Medicine,  
Medical University of South Carolina
- 2003- Dimitri Scholz, Ph.D., Departments of Medicine  
and Physiology, Medical University of South Carolina  
(From Max-Planck-Institute, Bad Nauheim)

**Collaborating Visiting Professors:**

- 1984-85 Ines K. Lauva, Ph.D., Department of Anatomy,  
Temple University. (From the Cleveland Clinic)
- 1984-87 Ryuichi Hisano, M.D., Departments of Medicine and  
Physiology, Temple University and Medical  
University of South Carolina. (From Kyushu University)
- 1987-90 Yoshitoshi Urabe, M.D., Departments of Medicine  
and Physiology, Medical University of South  
Carolina. (From Kyushu University)
- 1990-92 Hiroyuki Tsutsui, M.D., Departments of Medicine  
and Physiology, Medical University of South  
Carolina. (From Kyushu University)
- 1991-93 Takuroh Imamura, M.D., Departments of Medicine  
and Physiology, Medical University of South  
Carolina. (From Kyushu University)
- 1992-94 Hirofumi Tagawa, M.D., Departments of Medicine  
and Physiology, Medical University of South  
Carolina. (From Kyushu University)

1993-96	Hiroshi Sato, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Osaka University)
1994-96	Takahiro Narishige, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Kyushu University)
1996-98	Martin Laser, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Mannheim University)
1996-00	Yuji Ishibashi, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Kyushu University)
1997-00	Shintaro Nemoto, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Tokyo Womens' University)
1998-01	Yoshihiro Iijima, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Chiba University)
1998-01	Joachim Mueller, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Muenster University)
2000-	Masura Takahashi, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From Kyushu University)
2002-	Kentaro Yamane, M.D., Departments of Medicine and Physiology, Medical University of South Carolina. (From National Nagasaki Medical Center)

**Areas of Research Interest:**

Cardiovascular physiology, cellular and molecular biology, biochemistry, pharmacology, biomedical engineering, and anatomy

**FINANCIAL RESOURCES (GRANTS AND CONTRACTS):**

<b><u>Title</u></b>	<b><u>Period</u></b>	<b><u>Direct Costs</u></b>
<b><u>Federal</u></b>		
<b><u>Active and Submitted</u></b>		
Growth Regulation of Adult Feline Cardiac Muscle Cells (VA Merit Review) (Principal Investigator)	04/01/87-03/31/10	\$2,123,505
Connexin Distribution in Physiological Versus Pathological Cardiac Hypertrophy (VA Merit Review - Submitted) (Principal Investigator)		
MAP4 Regulation of Cardiac Microtubule Network Density (NIH, R01 - Submitted)		
$\beta$ -Adrenergic Control of the Pathological Cardiac Microtubule Network (NIH, R21 - Submitted)		
Multidisciplinary Research in Developmental Cardiology (NIH Training Grant - Co-Investigator)	07/01/93-06/30/08	\$2,794,236
Training to Improve Cardiovascular Drug Therapy (NIH Training Grant - Co-Investigator)	07/01/97-06/30/08	\$2,916,496
<b><u>Inactive</u></b>		
Load-Induced Cardiac Hypertrophy in the Adult Mammal (NIH, PPG) (Principal Investigator)	08/01/93-07/31/08	\$20,861,296
Basic Mechanisms of Cardiac Hypertrophy and Failure (VA Program Grant) (Principal Investigator)	10/01/98-09/30/03	\$1,350,000
The Role of c-Raf in Load-Induced Activation of p70 <sup>s6k</sup> (VA Merit Review - Co-Investigator)	04/01/99-03/31/04	\$550,505
Chronic Progressive Pressure Overload (VA Merit Review & Research Associate) (Principal Investigator)	07/01/78-06/30/81	\$197,544

Regulation of the Circulation in Pathological States (NIH, HL14388) (Co-Investigator)	07/14/79-11/31/81	\$20,183
Influence of Aging and Hypertension on the Myocardium (NIH, HL18629) (Co-Investigator)	09/01/80-09/30/81	\$234,445
The Mechanical Basis of Myocardial Energetics (NIH, HL29146) (Principal Investigator)	07/01/78-12/31/85	\$389,393
Cardiac Research Training Grant (NIH, HL07198 - Program Director)	07/01/76-12/31/85	\$129,117
General Clinical Research Center (NIH, RR00349) (Co-Investigator)	06/30/83-12/31/85	\$1,163,059
Quantitative Morphology of Cardiac Hypertrophy (NIH, HL29351) (Co-Investigator)	04/01/84-12/31/85	\$342,654
Growth Regulation of Adult Feline Cardiac Muscle Cells (VA Research Advisory Group) (Principal Investigator)	10/01/86-09/30/87	\$24,995
Contractile Performance of Cardiocytes Isolated from Hypertrophied Myocardium (VA Research Advisory Group) (Co-Investigator)	10/01/86-09/30/88	\$49,960
Growth Regulation of Adult Feline Cardiac Cells (NIH - Principal Investigator)	04/01/87-03/31/90	\$288,091
Contractile Performance of Cardiocytes Isolated from Hypertrophied Myocardium (VA Merit Review - Co-Investigator)	04/01/87-03/31/90	\$159,700
Growth Regulation of Adult Cardiac Muscle (VA Career Development Award)	01/01/88-12/31/93	\$374,700
Contractile Performance of Hypertrophied Cardiocytes (NIH Clinical Investigatorship - Preceptor)	07/01/87-06/30/92	\$286,500
Contractile Dysfunction in Cardiocyte Hypertrophy: Role of the Cytoskeleton (VA Merit Review - Co-Investigator)	04/01/90-03/31/93	\$412,400

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Load Regulation of Adult Mammalian Myocardium (NIH, HL37196) (Principal Investigator)	01/01/83-06/30/94	\$1,409,139
Sodium Influx Mediates Load Response of Cardiac Protein Synthesis (VA Merit Review - Co-Investigator)	04/01/88-03/31/96	\$448,200
Developmental Regulation of Cardiac Atrial and CDS Cells (NIH Clinical Investigatorship - Preceptor)	07/01/93-06/30/98	\$386,289

## **BIBLIOGRAPHY**

### **Papers Published or In Press**

Grant, W.C., Jr., and Cooper, G.: Behavioral and Integumentary Changes Associated With Induced Metamorphosis in *Diemictylus*. *Biol. Bull.*, 129: 510-522, 1965.

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### **Other: Invited Presentations**

“Myocardial Hypertrophy,” Department of Anatomy Seminars in Biostructure, University of Iowa, Iowa City, Iowa, February 1979.

“When Is the Optimal Time for Surgery in Aortic Valve Disease,” Meet-the-Experts Session, American College of Cardiology Meeting, Houston, Texas, March 9-13, 1980.

Co-Chairman, Fireside Panel Session of the American College of Cardiology, “Evaluation and Significance of Left Ventricular Hypertrophy”, San Francisco, California, March 16, 1981.

“The Energetics of Hypertrophied and Failing Myocardium,” Invited Presentation at a National Institutes of Health Workshop on Advanced Congestive Heart Failure (Bioenergetics Section, Eugene Braunwald, Chairman), Bethesda, Maryland, April 23-25, 1981.

Invited Presenter at a Symposium on the Biology of Myocardial Hypertrophy and Failure, International Society for Heart Research, Burlington, Vermont, June 15-17, 1981.

“Model Dependence of Contractile and Energetic Function of Hypertrophied Myocardium,” Invited Presentation at a National Institutes of Health Workshop on Myocardial Hypertrophy (Robert Tarazi, Chairman), Bethesda, Maryland, September 21-22, 1981.

“Neural Components in the Control of Cardiac Structure and Function,” Invited Presentation at the Annual Meeting of the International Society for Heart Research, Oklahoma City, Oklahoma, September 13-15, 1984.

“The Hypertrophy Signal - A Molecular Analysis,” Symposium Discussion Leader for the Conference on the Molecular Biology of the Cardiovascular System at the Annual Meeting of the International Society for Heart Research, Boston, Massachusetts, September 8-12, 1987.

“Load Induction of Cardiocyte Growth,” Invited Presentation at the Scientific Conference of the American Heart Association on Cardiac Hypertrophy, Big Sky, Montana, July 27-30, 1988.

“Growth Induction by Cardiocyte Loading,” Invited Presentation at the Annual Meeting of the International Society for Heart Research, Tokyo, Japan, May 27-30, 1988.

Chairman, Original Contribution Session on “Cardiac Function: Cellular and Molecular Function,” American College of Cardiology, Anaheim, California, March 22, 1989.

“Fos Proto-Oncogene Induction and Protein Synthesis Stimulation by Tumor Promoting Phorbol Esters in Cultured Adult Cardiocytes,” Invited Presentation at the INSERM Symposium on Basic Research in the Hypertensive Heart, Paris, France, July 17-19, 1989.

“Ventricular Failure Following Hemodynamic Overload: Muscle Versus Pump Dysfunction” and “Load Re-induction of Cardiac Growth in the Adult Mammal,” Invited Presentations at Emory University School of Medicine, Atlanta, Georgia, October 4-5, 1989.

“The Mechanical Signal for Cardiac Hypertrophy,” Invited Presentation at the British Society for Cardiac Research Symposium on Cellular Mechanisms in Cardiac Hypertrophy and Failure, Lady Margaret Hall at Oxford University and John Radcliffe Hospital, Oxford, England, November 24-25, 1989.

“Molecular Biology of Hypertrophy and Contraction,” Invited Presentation at the Conference on Advanced Drug Research in Heart and Vascular Disease, Nice, France, June 20-23, 1990.

“Cardiac Hypertrophy and Its Regression,” Plenary Session of the American Heart Association's 63<sup>rd</sup> Annual Scientific Sessions, Dallas, Texas, November 12-15, 1990.

“Mechanisms of Cardiac Hypertrophy Induction,” Invited Presentation at the Departments of Medicine and Physiology, University of Calgary Health Sciences Center, Calgary, Canada, November 26, 1990.

“Ventricular vs. Cellular Correlates in Cardiac Hypertrophy,” Invited Faculty Presentation for the American Society of Hypertension's 6<sup>th</sup> Annual Scientific Sessions, New York, New York, May 15-18, 1991.

Chairman, Original Contribution Session on “Cardiac Hypertrophy” and Invited Presentation entitled “Cardiocyte Defects: A Basis for Contractile Dysfunction in Cardiac Hypertrophy,” International Society for Heart Research, Cincinnati, Ohio, May 29 - June 2, 1991.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Invited Presentation at the Weis Center for Research, Geisinger Clinic, Danville, Pennsylvania, October 30, 1992.

Chairman, Session on “Consequences of Altered Gene Expression,” International Symposium on the Physiology of Diastole in Health and Disease, Palm Beach, Florida, January 29-31, 1993.

“Biochemical Events in Heart Muscle Remote from the Infarcted Segment,” Invited Presentation for the 42<sup>nd</sup> Annual Scientific Sessions of the American College of Cardiology, Anaheim, California, March 14-18, 1993.

“Pathophysiology of Cardiac Hypertrophy,” Invited Presentation for the National Research Council of Canada, New York, New York, May 16-18, 1993.

“Load Regulation of Cardiac Hypertrophy,” Invited Presentation for the Working Group on Cellular Biology of the Heart, European Society of Cardiology, Nice, France, August 29-31, 1993.

“Role of the Intracellular Cytoskeleton in Cardiac Hypertrophy,” Plenary Session of the American Heart Association's 66<sup>th</sup> Annual Scientific Sessions, Atlanta, Georgia, November 8-11, 1993.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Grand Rounds at the Beth Israel Hospital, Harvard University, Boston, Massachusetts, December 2, 1993.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Grand Rounds at the University of Cincinnati Medical Center, Cincinnati, Ohio, February 7, 1994.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Grand Rounds at the Heart and Vascular Institute of the Henry Ford Hospital, Detroit, Michigan, February 9, 1994.

“Endogenous Mediators in the Development and Progression of Cardiovascular Diseases,” Invited Presentation for the 43<sup>rd</sup> Annual Scientific Sessions of the American College of Cardiology, Atlanta, Georgia, March 13-17, 1994.

Chairman, FASEB Symposium on “Mechanisms of Contractile Dysfunction of the Hypertrophied Heart,” and Invited Presentation entitled “Cytoskeletal Changes in the Hypertrophied Cardiocyte,” FASEB Meeting, Anaheim, California, April 24-29, 1994.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Grand Rounds at the Brigham and Women’s Hospital, Harvard University, Boston, Massachusetts, June 2, 1994.

“Advances in Molecular Biology of Cardiac Hypertrophy,” Invited Presentation for the International Society for Heart Research, London, Ontario, Canada, July 20-23, 1994.

“Mechanical Stretch as a Signal for Cardiocyte Growth,” Invited Presentation for the American Physiological Society Conference on Mechanotransduction and the Regulation of Growth and Differentiation, Sarasota, Florida, October 5-8, 1994.

“The Causes and Consequences of Cardiac Hypertrophy,” George E. Brown Memorial Lecture, Council on Circulation, American Heart Association’s 67<sup>th</sup> Annual Meeting, Dallas, Texas, November 14-17, 1994.

“Constitutive Properties of the Hypertrophied Cardiocyte,” Invited Presentation for the Department of Physiology, Michigan State University, East Lansing, Michigan, March 2, 1995.

“Molecular Basis for the Devolution from Compensated Cardiac Hypertrophy to Decompensated Cardiac Failure,” Burton Tabakin Memorial Lecture, University of Vermont College of Medicine, Burlington, Vermont, May 4, 1995.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Burton Tabakin Memorial Lecture at the University of Vermont Medical Center, Burlington, Vermont, May 5, 1995.

“Load Regulation of Cardiocyte Properties,” Invited Presentation for the International Society for Heart Research, Otto Frank Symposium on Cardiac Hypertrophy and Regression, Munich, Germany, June 29-July 1, 1995.

“Mechanical Properties of the Cytoskeleton of the Hypertrophied Cardiocyte,” Invited Lecture for the International Society for Heart Research, Prague, Czech Republic, July 2-6, 1995.

“Role of the Cytoskeleton in the Contractile Dysfunction of Hypertrophied Myocardium,” Invited Presentation for the Department of Medicine, University of Texas Health Science Center, San Antonio, Texas, July 13, 1995.

“Cellular Basis of Heart Failure,” Invited Presentation at the Weis Center for Research, Geisinger Clinic, Danville, Pennsylvania, August 15, 1995.

“Role of the Cytoskeleton in the Transition from Cardiac Hypertrophy to Failure,” Invited Presentation to the Division of Cardiovascular Pharmacology, Bristol-Myers Squibb, Inc. Princeton, New Jersey. October 17, 1995.

“Role of the Cytoskeleton in the Contractile Dysfunction of Hypertrophied Cardiocytes,” Invited Presentation to the Division of Cardiovascular Research, Glaxo Research and Development, Ltd., Paris, France, November 1, 1995.

“Increased Microtubule Density as a Cause for the Contractile Dysfunction of Hypertrophied Myocardium,” Invited Presentation for the Allegheny-Singer Research Institute, Pittsburg, Pennsylvania, November 1, 1995.

“Cytoskeletal Role in the Contractile Dysfunction of Hypertrophied Myocardium,” Invited Presentation for the Department of Medicine, University of Connecticut Health Science Center, Farmington, Connecticut, December 5, 1995.

“Role of Microtubules in the Contractile Dysfunction of Hypertrophied Myocardium,” Invited Presentation for the Department of Medicine, University of Rochester Medical Center, Rochester, New York, December 12, 1995.

“Intracellular Tubulin and Contractile Dysfunction,” Invited Presentation for the American Heart Association Conference “Molecular Biology of the Normal, Hypertrophied, and Failing Heart,” Snowbird, Utah, August 21-25, 1996.

“Update: What Is the Stimulus to Cardiac Growth?,” ACCEL tape for the American College of Cardiology, Heart House, Bethesda, Maryland, November 12, 1996.

“Cytoskeletal Role in Cardiac Properties,” Invited Presentation for the Johnson Research Institute, Mayo Clinic, Scottsdale, Arizona, June 2, 1998.

“Microtubule and Other Cytoskeletal Abnormalities in the Failing Heart,” Invited Presentation for the Heart Failure Society of America, Boca Raton, Florida, September 15, 1998.

“Mechanical Load Detection,” Invited Presentation for the Third International Symposium on Heart Failure, Bühlerhöhe, Germany, September 26, 1998.

“Cardiac Hypertrophy: Physiologic versus Pathologic Growth,” Invited Presentation for the Symposium on New Frontiers in Heart Failure Research, Key Biscayne, Florida, October 30, 1998.

“Cytoskeleton and Cardiac Function,” Invited Presentation for the American Heart Association Conference “Molecular, Cellular, and Integrated Physiological Approaches to the Failing Heart,” Snowbird, Utah, August 18-22, 1999.

“The Extra-Myofilament Cytoskeleton of the Hypertrophied Heart,” Grand Rounds at Case Western Reserve University, Cleveland, Ohio, October 28, 1999.

“Dynamic Hemodynamic Regulation of Myocardial Properties,” State-of-the-Art Lecture, American College of Cardiology National Meeting, Anaheim California, March 13, 2000.

“Cardiac Structure – Function Relationships at the Cellular Level,” Johnson McGuire Visiting Professor Lecture at the University of Cincinnati College of Medicine, September 27, 2000.

“Microtubule Response in Pressure Overload,” Invited Presentation for the Heart Failure Society of America, Boca Raton, Florida, September 12, 2000.

“Hypertrophy, Remodeling, Regression, Atrophy: Which Promotes Health and Is Adaptive or Maladaptive?” Invited Presentation for the American Heart Association's 73<sup>rd</sup> Annual Meeting, New Orleans, Louisiana, November 13, 2000.

"Cytoskeleton- Based Transport," Invited Presentation for the American Heart Association Conference "Advances in the Molecular and Cellular Mechanisms of Heart Failure," Snowbird, Utah, August 21-25, 2002.

“The Causes and Consequences of Cardiac Hypertrophy,” Keynote Lecture for the Annual Meeting of the American College of Veterinary Internal Medicine, Charlotte, North Carolina, June 4, 2003.

Chairman, Original Contribution Session on “Molecular Basis for Remodeling: Insights from Genetically Engineered Models,” American Heart Association, Orlando, Florida, November 11, 2003.

Session Chairman and Presenter of Wigger's Award Lecture, Wigger's Award Featured Topic Session, American Physiological Society Section of the FASEB Meeting, Washington, D.C., April 17 – 21, 2004.

Chairman, Original Contribution Session on "Ventricular Function, Mechanics and Contractility," American Heart Association, Dallas, Texas, November 16, 2005.

"The Microtubule Hypothesis: A Direct Test in the Normal and Hypertrophied Heart." Invited Presentation for the Annual Meeting of the Association of University Cardiologists, Carmel, California, January 13, 2006.