

SUMMARY VITAE
LARRY F. LEMANSKI, Ph.D.

WORK: **Texas A&M University-Commerce, Commerce, TX** (2009-present)
Texas A&M University-Commerce, TX

Current Appointments:

Regents Professor, Texas A&M University System (2016-present)
Eminent Faculty Scholar, Texas A&M University-Commerce (2019-present)
Distinguished Research Professor (tenure) Department of Biological and Environmental Sciences (2015-present)
Founding Director, Biomedical Institute for Regenerative Research (2016-present)

Past Appointments:

Provost and Vice President for Academic Affairs (2009-2012)
Founding Executive Director and Chief Research Officer, Division of Research (2012-2013)
Distinguished Research Professor (tenure) and Head, Department of Biological and Environmental Sciences (2013-2015)
Professor (tenure), Department of Biological and Environmental Science (2009-2015)

NeoHeart, LLC (2015-present)

Biotechnology Company, Founding President and CEO (2015-present)

Temple University, Philadelphia, PA (2007-2009)

Senior Vice President for Research and Strategic Initiatives
Professor (tenure) of Anatomy and Cell Biology, College of Medicine
Professor of Biology, College of Science and Technology
Affiliate Research Faculty, Cardiovascular Research Center

Florida Atlantic University, Boca Raton, FL (2001-2007)

Vice President for Research (2001-2007)
Vice President for Research and Graduate Studies (2002-2006)
Dean of Graduate Programs (2002-2006)
Professor (tenure) of Biomedical Science, College of Biomedical Science (2001-2007)
Professor of Biology, College of Science (2001-2007)
Professor of Chemistry, College of Science (2001-2007)

Florida Atlantic University Research Corporation [501-C-3] (2001-2007)

President and CEO

University of Miami, Miller School of Medicine, Miami, FL (2004-2007)

Volunteer Professor of Cell Biology and Anatomy

Texas A&M University, College Station, TX (1997-2001)

Associate Vice President for Research and Graduate Studies (1997-2001)

Acting Vice President for Research (Office of Research and Graduate Studies (2000)

Professor (tenure) of Medical Physiology, College of Medicine, Texas A&M System Medical Center (1997-2001)

Professor of Biology, College of Science (1997-2001)

State University of New York Upstate Medical University, Syracuse, NY (1983-1997)

Professor (tenure) and Chairperson of Anatomy and Cell Biology (1983-1997)

Founder and First Director of the Cell and Molecular Biology Graduate Research and Training Program (1987-1990)

Lecturer in Program of Medical Humanities (1994-1997)

Syracuse University, Syracuse, NY (1987-1997)

Research Professor of Biology, College of Arts and Sciences

University of Wisconsin, Madison, WI (1977-1983)

Professor (tenure) of Anatomy, College of Medicine (1981-1983)

Professor (affiliate) of Animal Biology, College of Agriculture (1981-1983)

Associate Professor (tenure) of Anatomy, College of Medicine (1979-1981)

Associate Professor (affiliate), College of Agriculture (1979-1981)

Assistant Professor of Anatomy, College of Medicine (1977-1979)

Assistant Professor of Animal Biology (affiliate), College of Agriculture (1977-1979)

Established Investigator of the National American Heart Association (1977-1981)

University of California, San Francisco, CA (1975-1977)

Assistant Professor of Anatomy (In Residence), College of Medicine

Established Investigator of the National American Heart Association (1976-1977)

San Francisco Veteran's Administration Hospital, San Francisco, CA (1975-1977)

Research Associate, Division of Cardiovascular Research

Research Associate, Division of Cell Biology Research

University of Pennsylvania, Philadelphia, PA (1971-1975)

Muscular Dystrophy Association (MDA) Postdoctoral Fellow, Department of Biology, College of Arts and Sciences (1973-1975)

Research Associate, Muscle Biology Institute (1973-1975)

National Institutes of Health Postdoctoral Trainee, Department of Biology, College of Arts and Sciences (1971-1973)

EDUCATION:

Harvard University, Cambridge, MA, Intensive Training for University Executives (Summer, 2010)

University of Pennsylvania, Philadelphia, Postdoctoral Fellow, 1971-1975

Arizona State University, Tempe (Zoology), Ph.D., 1971

“Histological, Histochemical and Ultrastructural Studies on Developing Hearts of Normal and Cardiac Lethal Mutant Axolotls, *Ambystoma mexicanum*”

Arizona State University, Tempe (Zoology), M.S., 1968

“Ultrastructural Studies on 48-hour Canine Renal Homografts”

University of Wisconsin, Platteville (Biology major; Chemistry minor), B.S. (with honors), 1966

SCHOLARSHIP:

- 108 Refereed journal articles
- 12 Refereed Proceeding Articles
- 9 Invited Research Review Book Chapters
- 176 National and International Professional Paper Presentations
- 1 Newspaper Article
- 26 Postdoctoral Fellows and Research Associates
- 14 Doctoral Dissertations (Major Professor and Chair)
- 26 Masters Theses (Major Professor and Chair)
- 20 Undergraduate Honors Theses
- >120 National and International Lectures
- 15 Professional Organization Memberships
- 21 Boards of Directors Memberships
- 23 Manuscript referee for 23 different journals
- 3 Editorial Boards for three journals
- 15 Grant referee for 15 different agencies
- 12 Camtasia Video/YouTube lectures in Developmental Biology—Has own YouTube channel

ENTREPRENEURSHIP:

- Attending National Science Foundation I-CORPS National Program, Dallas, TX, funded by NSF I-CORPS Grant (PI)
- Completed National Science Foundation I-CORPS Regional Program, Houston, TX
- Produced a new start-up biotechnology company, NeoHeart, LLC—Founder, President and CEO
- Inventor on 2 issued patents on RNAs that Produce Cardiac Muscle Cells
- Judge for Entrepreneurship Presentation, Texas A&M University College of Business McFerrin Center for Entrepreneurship, College Station, TX

FUNDRAISING/FUND GETTING:

- 38 Funded Extramural Research Grants as Principal Investigator/Principal Offerer Total funding ~\$24,100,000
- 6 Funded Programs obtained for institution through federal, congressional appropriations funding ~\$28,000,000
- 2 Patents (Issued 9/18/07 and 7/31/19)

TABLE OF CONTENTS

Summary Vitae	Page 1-3
Table of Contents	Page 4
Current Positions/Personal Information	Page 5
Education/Fellowships	Page 6
Academic Positions	Page 6-7
Business/Commercialization/Entrepreneurship Activities	Page 7-8
Professional Honors, Awards and Prizes	Page 8-9
Professional Societies	Page 9-10
Boards of Directors	Page 10
Administrative Experience	Page 10-21
University Committee Assignments	Page 21-23
Fundraising/Fund Getting	Page 23
Training Grant/Program Membership	Page 24
Professional Service	Page 24-26
Military, Social and Community Activities	Page 26-27
Teaching Experience	Page 27-28
Sponsorship of Students/Postdoctoral Fellows/Visiting Scientists	Page 28-33
Area of Research Interests	Page 33
Extramural Research Support Awards	Page 33-38
Patents	Page 38
National and International Lectures/Conferences/Keynote Speeches	Page 38-40
Invited Research Seminar Speaker	Page 40-42
Full Length Publications/Professional Paper Presentations	Page 42-60

CURRICULUM VITAE

Larry Fredrick Lemanski

POSITIONS

Texas A&M University-Commerce, TX

Current Appointments:

Texas A&M University System Regents Professor (2016-present)

Eminent Faculty Scholar (2019-present)

Distinguished Research Professor (tenure) Department of Biological and Environmental Sciences (2015-present)

Founding Director, Biomedical Institute for Regenerative Research (2016-present)

Past Appointments:

Provost and Vice President for Academic Affairs (2009-2012)

Founding Executive Director and Chief Research Officer, Division of Research (2012-2013)

Distinguished Research Professor (tenure) and Head, Department of Biological and Environmental Sciences (2013-2015)

Professor (tenure), Department of Biological and Environmental Science (2009-2015)

NeoHeart, LLC

Founding President and CEO, (Biotechnology Company) (2015-present) NeoHeart, LLC has licensed technology from the Texas A&M University System to develop clinical treatments for heart disease using our newly-discovered ribonucleic acid (RNA) that converts non-muscle cells into cardiac muscle tissue. This technology has the potential to regenerate damaged muscle in patients who have suffered heart attacks or other heart diseases and allow them to return to normal pre-heart-disease activity levels.

MAILING ADDRESS

Texas A&M University-Commerce

P.O. Box 3011

Commerce, Texas 75429

Telephone: (903) 886-5909

Cell: (561) 654-3900

E-mail: larry.lemanski@tamuc.edu

EDUCATION**INSTITUTION AND LOCATION**

University of Wisconsin, Platteville, WI

Arizona State University, Tempe, AZ

Arizona State University, Tempe, AZ

University of Pennsylvania, Philadelphia, PA

DEGREE

B.S., Biology (with Honors)

M.S., Zoology

Ph.D., Zoology

Postdoctoral, Cell Biology

UNIVERSITY EXECUTIVE TRAINING

Harvard University, Cambridge, MA, Graduate School of Education, the Harvard Institutes for Higher Education, and Institute for Educational Management (intensive summer training session for university-level executives, 2010)

FELLOWSHIPS

- ◆ NIH Predoctoral Fellowship, Arizona State University
Dr. E.M. Bertke (Sponsor)
- ◆ NIH Postdoctoral Fellowship, University of Pennsylvania
Dr. Lee D. Peachey (Sponsor)
- ◆ Muscular Dystrophy Association Postdoctoral Fellowship, University of Pennsylvania. Dr. Lee D. Peachey (Sponsor)
- ◆ American Heart Association Faculty Established Investigator Award, University of California, San Francisco
- ◆ American Heart Association Faculty Established Investigator Award, University of Wisconsin, Madison

ACADEMIC/FACULTY POSITIONS**Texas A&M University-Commerce****2019-present** Eminent Faculty Scholar**2016-present** Texas A&M University Regents Professor**2015-present** Founder and Director, Biomedical Institute for Regenerative Research (BIRR)**2015-present** Distinguished Research Professor (tenure), Department of Biological and Environmental Sciences, Texas A&M University-Commerce, Commerce, Texas**2013-2015** Distinguished Research Professor and Head, Department of Biological and Environmental Sciences, Texas A&M University-Commerce, Commerce, Texas**2012-2013** Founding Executive Director and Chief Research Officer for a new Division of Research and Sponsored Programs (which I was charged with creating), Texas A&M University-Commerce, Commerce, Texas**2009-2012** Provost and Vice President for Academic Affairs, Texas A&M University-Commerce, Commerce, Texas**2009-present** Professor (tenure), Department of Biological and Environmental Science, Texas A&M University-Commerce, Commerce, Texas**Temple University****2007-2009** Senior Vice President for Research and Strategic Initiatives, Temple University, Philadelphia, Pennsylvania**2007-2009** Professor (tenure), Department of Anatomy and Cell Biology, School of Medicine, Temple University, Philadelphia, Pennsylvania

- 2007-2009** Affiliated Faculty, Cardiovascular Research Center, School of Medicine, Temple University, Philadelphia, Pennsylvania
- 2007-2009** Professor, Department of Biology, Temple University, Philadelphia, Pennsylvania
Florida Atlantic University
- 2001-2007** Vice President for Research, Florida Atlantic University, Boca Raton, Florida
- 2002-2006** Vice President for Research and Graduate Studies, Florida Atlantic University, Boca Raton, Florida
- 2001-2007** President and CEO of the Florida Atlantic University Research Corporation, Florida Atlantic University, Boca Raton, Florida
- 2002-2006** Dean of Graduate Programs, Florida Atlantic University, Boca Raton, Florida
- 2001-2007** Professor (tenure), Department of Biomedical Science, Florida Atlantic University, Boca Raton, Florida
- 2001-2007** Professor, Department of Biology, Florida Atlantic University, Boca Raton, Florida
- 2002-2007** Professor, Department of Chemistry, Florida Atlantic University, Boca Raton, Florida
- 2004-2007** Volunteer Professor, Department of Cell Biology and Anatomy, University of Miami Miller School of Medicine, Miami, Florida
Texas A&M University, College Station
- 1997-2001** Associate Vice President for Research, Office of Research and Graduate Studies, Texas A&M University, College Station, Texas
- 1997-2001** Professor, Department of Biology, College of Science, Texas A&M University, College Station, Texas
State University of New York Health Science Center, Syracuse
- 1983-1997** Professor (tenure) and Chairman, Department of Anatomy and Cell Biology - State University of New York Health Science Center, Syracuse, New York
- 1987-1990** Director, Cell and Molecular Biology Program - State University of New York Health Science Center, Syracuse, New York
- 1998** Research Professor, Department of Biology - Syracuse University, Syracuse, New York
- 1998-2001** Lecturer, Program in Medical Humanities - State University of New York Health Science Center, Syracuse, New York
University of Wisconsin, Madison
- 1981-1983** Professor of Anatomy (tenure), College of Medicine, University of Wisconsin, Madison
- 1981-1983** Affiliate Professor of Animal Biology, College of Agriculture - University of Wisconsin, Madison
- 1979-1981** Associate Professor of Anatomy (tenure), College of Medicine, University of Wisconsin, Madison
- 1979-1981** Affiliate Associate Professor of Animal Biology, College of Agriculture, University of Wisconsin, Madison
- 1977-1979** Assistant Professor of Anatomy - University of Wisconsin, Madison
- 1977-1979** Affiliate Assistant Professor of Animal Biology, College of Agriculture, University of Wisconsin, Madison
- 1977-1981** National American Heart Association Established Investigator Awardee
University of California Medical Center, San Francisco
- 1975-1977** Assistant Professor of Anatomy - University of California Medical Center, San Francisco
- 1976-1977** National American Heart Association Established Investigator Awardee

BUSINESS/COMMERCIALIZATION/ENTREPRENEURSHIP ACTIVITIES

Participating in National Science Foundation I-CORPS National Program, Dallas, TX

National Science Foundation I-CORPS Regional Program, Houston, TX

Produced a new start-up biotechnology company, NeoHeart, LLC—Founder,
President and CEO

Inventor on two issued patents on RNAs that Produce Cardiac Muscle Cells

Entrepreneurial Judge of Business Pitches for the Raymond Ideas Challenge, Texas A&M University
College of Business McFerrin Center for Entrepreneurship, College Station, TX

PROFESSIONAL HONORS, AWARDS AND PRIZES

- ◆ Named Eminent Faculty Scholar, Texas A&M University-Commerce (2019)
- ◆ Designated as Texas A&M University System Regents Professor (2016)
- ◆ Outstanding Research Award for “Unfettered Investigation”, TAMUC Faculty Senate Award (2016)
- ◆ Outstanding Research Mentor Award. Texas A&M University-Commerce (2014)
- ◆ Distinguished Accomplishments in International Science and Education Award, in special recognition of distinguished accomplishments in interdisciplinary thinking with broad impact in biological science, medical research and education, Society for Design and Process Science’s (SDPS) Annual Conference, Berlin, Germany (2012)
- ◆ Guest of Honor-Inaugural Session.XIII International Seminar on Ethics, Morality and Spirituality, Delhi, India (2012)
- ◆ Honoris Causa Professorship, Delhi School of Professional Studies and Research, Rohini, Delhi, India Devine Group, Delhi, India (2012)
- ◆ Elected Fellow, International Society for Design and Process Science (2011)
- ◆ Research article “Zhang, C., P. Jia, Y. Jia, Y. Li, K.A. Webster, X. Huang, M. Achary, S.L. Lemanski, and L.F. Lemanski 2011 Anoxia, acidosis and intergenic interactions selectively regulate methionine sulfoxide reductase transcriptions in mouse embryonic stem cells. *J. Cell. Biochem.* 112: 98-106” selected as a featured article by the *Journal of Cellular Biochemistry*
- ◆ Research article “Zhang, C., P. Jia, Y. Jia, Y. Li, K.A. Webster, X. Huang, M. Achary, S.L. Lemanski, and L.F. Lemanski 2011 Anoxia, acidosis and intergenic interactions selectively regulate methionine sulfoxide reductase transcriptions in mouse embryonic stem cells. *J. Cell. Biochem.* 112: 98-106” selected as a featured article by the *Journal of Cellular Biochemistry*
- ◆ Research article “Zhang, C., P. Jia, Y. Jia, Y. Li, K.A. Webster, X. Huang, M. Achary, S.L. Lemanski, and L.F. Lemanski 2011 Anoxia, acidosis and intergenic interactions selectively regulate methionine sulfoxide reductase transcriptions in mouse embryonic stem cells. *J. Cell. Biochem.* 112: 98-106” selected as a featured article by the *Journal of Cellular Biochemistry*
- ◆ Outstanding Research Leadership Award, Broward County Alliance, Florida
- ◆ Featured in South Florida CEO Magazine as a Bioscience Leader
- ◆ Mathew Romer Foundation “See the Light” Award
- ◆ The Honor Society of Phi Kappa Phi
- ◆ Elected Fellow, American Association for the Advancement of Science
- ◆ Phi Beta Delta—Honor Society for International Scholars
- ◆ Outstanding Researcher Award, Department of Anatomy and Cell Biology, State University of New York
- ◆ American Men and Women of Science
- ◆ President's Award for the Advancement of Affirmative Action - "for having excelled in the attainment of Affirmative Action Goals, the promotion of diversity, and development of innovative approaches and programs to recruit and retain members of underrepresented groups and maintain a multicultural environment", State University of New York
- ◆ United University Professions/New York State Excellence Award

- ◆ Distinguished Alumnus Award, University of Wisconsin, Platteville
- ◆ Presidential Outstanding Research Award, State University of New York, Syracuse
- ◆ Distinguished International Science Examiner, Bhopal University, India
- ◆ Outstanding Researcher Award, American Heart Association of Wisconsin
- ◆ Established Investigatorship Award from the National American Heart Association
- ◆ Louis N. Katz Basic Science Research Prize - an award of the National American Heart Association "to an individual who, through basic research, has made the most significant original contribution pertinent to cardiovascular phenomena"
- ◆ Society for the Sigma Xi
- ◆ Electron Microscopy Society of America Presidential Scholarship (for outstanding paper presented by a graduate student)
- ◆ Arizona Academy of Science Research Award
- ◆ Named in "Who's Who Among Students in American Universities and Colleges"
- ◆ Honor Graduate of University of Wisconsin, Platteville

INVITED WHO'S WHO BIOGRAPHY LISTINGS

- ◆ "Who's Who Among Students in American Universities and Colleges"
- ◆ Marquis "Who's Who in America"
- ◆ Marquis "Who's Who in the World"
- ◆ Marquis "Who's Who in American Education"
- ◆ Marquis "Who's Who in Medicine and Healthcare"
- ◆ Marquis "Who's Who in Science and Engineering"
- ◆ American Men and Women of Science
- ◆ Swarthmore's "Who's Who in America"
- ◆ International "Who's Who of Professionals"
- ◆ International Biographical Center "Who's Who in the 21st Century"
- ◆ Empire "Who's Who Registry of Executives and Professionals"

PROFESSIONAL SOCIETIES

- ◆ Beta Beta Beta Biological Sciences Honor Society
- ◆ Society for the Sigma Xi Honor Society (former Chapter President)
- ◆ The Histochemical Society
- ◆ Society for Developmental Biology
- ◆ American Society of Zoologists
- ◆ American Association for the Advancement of Science (elected "Fellow")
- ◆ American Society for Cell Biology
- ◆ Electron Microscopy Society of America (President's Award)
- ◆ American Heart Association (Peer Review Committees and Research Committee in Wisconsin, New York, Florida, and current member of Peer Review Committee for Texas)
- ◆ International Society for Heart Research
- ◆ Experimental Biology and Medicine
- ◆ American Association of Anatomists (Appointed to the Nominations Committee 1998-2002; elected to National Public Affairs Committee 2001-2004)
- ◆ New York Academy of Sciences
- ◆ Association of Anatomy, Cell Biology, and Neurobiology Chairs (elected to National Council 1997-2001)

- ◆ International Society for Stem Cell Research
- ◆ Phi Delta Kappa
- ◆ Society for Design and Process Science (elected “Fellow”)

BOARDS OF DIRECTORS

- ◆ Hiawatha Council, Boy Scouts of America (Board of Directors, 1992-1997)
- ◆ Texas Biomedical Research Institute Board of Directors (1997-2001)
- ◆ Oak Ridge Associated Universities (Elected to the National Board of Directors 2000-2003; 2004-2007)
- ◆ Florida Atlantic University Research Corporation (President and Chairman of the Board 2001-2007)
- ◆ Florida Atlantic Development Authority, Inc. (Board of Directors 2001-2007)
- ◆ Enterprise Development Corporation (Board of Directors 2001-2007)
- ◆ University Alliance for Research, Education and Technology (Board of Directors, 2002-2007)
- ◆ Florida Research Consortium (Board of Directors 2001-2007)
- ◆ Florida Research Consortium (Executive Committee of Board of Directors, 2002-2006)
- ◆ Internet Coast (Board of Directors 2003-2007)
- ◆ Mathew Forbes Romer Foundation for Rare Genetic Diseases (Board of Directors, 2003-2007)
- ◆ Mathew Forbes Romer Foundation for Rare Genetic Diseases (Emeritus Board of Directors Member, 2008-present)
- ◆ Institute for Human and Machine Cognition (Board of Directors, 2003-2007, State of Florida Governor Appointee)
- ◆ Florida NASA Space Institute (Board of Directors, 2004-2007; State University of Florida System Appointee)
- ◆ Palm Beach County Business Development Board (Biotechnology Advisory Committee, 2006-2007)
- ◆ Institute for Human and Machine Cognition (Science Advisory Board, 2007-present)
- ◆ Latin America Grid (IBM International Board of Governors, 2006-2008)
- ◆ Keystone Innovation Zone (Board of Directors, 2008-2009)
- ◆ Philadelphia Science Center (Board of Directors, 2008-2009)
- ◆ Philadelphia Science Center (Science Advisory Board, 2008-2009)
- ◆ Bio Strategy Partners (Board of Directors, 2008-2009)
- ◆ Philadelphia Biotechnology and Life Sciences Institute (Board of Directors, 2008-2009)
- ◆ Texas Common Course Numbering System (Board of Directors, 2010-2012)

ADMINISTRATIVE EXPERIENCE

1983-1997 Chairperson and Professor, Department of Anatomy and Cell Biology, State University of New York Health Science Center at Syracuse

- ◆ Departmental extramural funding increased more than 9 fold during the last ten years I chaired the department
- ◆ All faculty I appointed succeeded in obtaining substantial federal extramural grant support.
- ◆ The graduate student program increased from 5 students to 25 students; most of the students were funded through a variety of internal and extramural funds.
- ◆ Overall, the Department of Anatomy and Cell Biology grew in number (faculty, technicians, secretaries, students, postdoctorals and support staff) from 37 members to 88 members.
- ◆ National Board scores in Anatomy at the SUNY Health Science Center (HSC) rose progressively from well below the national average in 1983 to well above the national average in 1997.

- ◆ The Department of Anatomy and Cell Biology won the Distinguished Teaching Award for the last nine years in a row that I chaired the department. Prior to my assuming the Chair, the department had never won the award, which was initiated more than 40 years earlier. In fact, the year I began as Chair, the department was rated as the worst basic science department on campus in teaching based upon student evaluations and national board scores; when I left it was ranked number 1 in the university on student evaluations and on National Board scores.
- ◆ Sponsorship of departmental faculty/staff promotions and awards:
 - eighteen faculty promotions to the Associate and Full Professorial Ranks
 - six faculty received the New York State/United University Professions Award
 - ten faculty received Presidential Awards for Teaching Excellence
 - two faculty members promoted to "Distinguished Professor of the SUNY System"
 - four faculty members received the Statewide Chancellor's Award for Excellence in Teaching
 - two faculty members appointed Director of the Cell and Molecular Biology Program (SUNY Health Science Center, Syracuse)
 - three faculty members appointed Director of the Neuroscience Training Program (SUNY Health Science Center, Syracuse)
 - three faculty members received NIH Research Career Development Awards
 - one faculty member received an AHA Established Investigatorship Award
 - one Postdoctoral Fellow (from my laboratory) received the Alpha Omega Alpha Outstanding Research Award
 - six departmental graduate students (one from my laboratory) received the Alpha Omega Alpha Graduate/Medical Student Research Award
 - four staff members honored with "University Employee of the Month Award"
 - eight graduate students awarded summer fellowships to attend a Woods Hole Oceanographic Institute course
 - one faculty member appointed a Director of the M.D./Ph.D. Program
 - three faculty members (I recruited as Assistant Professors) became Chairs of major medical school departments
 - one faculty member became Research Director of a major research institute at a leading Canadian university (McGill)
- ◆ Initiated on campus and served as Program Director for NIH supported interdepartmental multi-user equipment grant to purchase new freeze fracture system for department
- ◆ Department cited as the "Best" basic science department and one of three "outstanding" departments (out of 24) by the LCME Site Visit Accreditation Team
- ◆ Initiated and served as Principal Investigator on a request to purchase a Laser confocal scanning microscope system for the medical center from a New York State supported multi-user interdepartmental grant
- ◆ Initiated on campus and served as Program Director for American Heart Association Campus Wide Medical Student Fellowship Training Grant Program (for support of four medical students per year to do full-time research). Seven of the twenty-two individuals recruited into this program ended up getting combined M.D./Ph.D. degrees.

1987-1990 Director, Cell and Molecular Biology Program, State University of New York, Health Science Center at Syracuse

I initiated the Cell and Molecular Biology Program and secured its funding (\$1,500,000) from the Graduate Initiative Program from SUNY Central (in Albany). The Dean of the Graduate School subsequently appointed me as the CMB Program's first director (to be rotated at three-year intervals). It

began as a collection of 23 Cell and Molecular Biologists, which I appointed, representing eight different basic science and clinical departments on campus and expanded to include faculty at Syracuse University and SUNY College of Environmental Science and Forestry, Syracuse. It had grown to more than 40 faculty by the time I left Syracuse. The program continued to flourish and form the basis for the Cell and Molecular Biology Graduate and Postdoctoral Training Program at SUNY, Syracuse.

1997-2001; 2000 Associate Vice President for Research, Texas A&M University; Acting Vice President for Research, Texas A&M University, College Station, Texas

As the Associate Vice President at Texas A&M, I was “second in command” of the Office of The Vice President for Research and Associate Provost for Graduate Education and was in charge of the Office when the Associate Provost/Vice President was away. In this capacity, I had significant responsibilities in the overall operation of the research enterprise as well as graduate education at Texas A&M University. At that time, the Texas A&M campus in College Station had 9 Colleges plus a Medical School as part of the System Health Science Center as well as several major interdisciplinary research and training programs, forming a very broad and comprehensive university. There were about 2,500 faculty and 45,000 students, including approximately 8,000 graduate and professional students. In FY2000, over \$400,000,000 was spent on research activities at Texas A&M (number 10 in the nation); in one way or another, my office was responsible for the administration of this research. Specific duties and accomplishments as Associate Vice President for Research and Acting Vice President for Research:

- ◆ Responsible for the Office of Sponsored Projects including administration of grants, contracts, intellectual property and related activities
- ◆ Supervised the University Veterinarian and had responsibility for the Laboratory Animal Resources and Research Facilities on campus
- ◆ Administered and chaired the peer review panels for four faculty enhancement grant programs at Texas A&M: 1) Scholarly and Creative; 2) Energy Resources (state of Texas); 3) Interdisciplinary and 4) Faculty mini-grant program
- ◆ Arranged and made commitments for university matching funds for major grants submitted by faculty (e.g., NSF-Science and Technology grants, NIH equipment grants or National Endowment for the Humanities, National Education Association, etc.)
- ◆ Initiated on campus, electronic research administration for our internal grants programs and reviewed ways to get our campus on line for the upcoming electronic grant submission requirements of various private and government agencies (NIH, NSF, NASA, AHA, etc.)
- ◆ Took a lead state-wide in Texas in setting up the TRUF (Texas Research University Forum) which involved organizing the research administrators and faculty of the University of Texas, Texas A&M, University of Houston and Texas Tech University. A major purpose of the organization was to determine “common” concerns and goals of these four major state-supported research universities and to articulate these goals to the Texas legislature through our University Administrators.
- ◆ For admission to AAU (American Association of Universities), I wrote a synopsis of the history and accomplishments of Texas A&M University. The document was entitled: “Texas A&M: A Prospectus”. I was told that this document was a major factor in Texas A&M gaining admission into the American Association of Universities (AAU). It also served to keep an updated record of significant accomplishments of the faculty, staff, students and university.
- ◆ Put together a major university-wide survey concerning the effectiveness of our faculty enhancement grant programs with respect to faculty productivity as well as the leveraging of funds from extramural sources

- ◆ Initiated a major effort to significantly increase funding for faculty/student research in all areas. For example, areas which were particularly neglected in the past at Texas A&M were the scholarly and creative activities. These activities were underfunded and I worked very hard to increase funding to enhance the opportunities for liberal arts faculty to pursue scholarly and creative works (finish writing books in progress, do archival research, perform in and direct plays, etc.).
- ◆ Served on the Texas A&M President's "Vision 2020 Task Force". This was a university-wide committee to develop a plan to make Texas A&M University a "top 10" university overall by the year 2020. I served as the "facilitator" for the subgroup on graduate education.
- ◆ Appointed membership on and had responsibility for several of the research compliance committees at Texas A&M. These included: Institutional Review Board for Human Subjects (IRB), University Laboratory Animal Care Committee (ULACC), and the University Committee on Hazardous Biomaterials (UCHB).
- ◆ Involved in developing and applying the Rules and Standard Administrative Procedures (SAPS) when dealing with issues of academic misconduct (fraud, plagiarism, etc.)
- ◆ Responsible for overseeing and resolving cases of academic misconduct, plagiarism, fraud, etc. working with research standards officers as assigned by the Provost or Vice President for Research
- ◆ Gave instruction to faculty, staff and graduate students on ethics, academic/research standards and misconduct as part of the new faculty and new graduate student orientations
- ◆ Hosted various national and international delegations of visitors to campus. Usually gave a welcoming speech and overview of research activities at Texas A&M as well as host lunches or dinners.
- ◆ Involved in conducting and hosting external reviews of various interdisciplinary graduate programs on campus
- ◆ Administrative Member, The University Research Infrastructure Committee. This committee analyzed and made recommendations to the University Provost and President concerning which areas of research should be funded.
- ◆ National Sub-Committee on Electronic Research Information for the Federal Demonstration Partnership, National Academy of Sciences
- ◆ Texas A&M University Councilor to the Oak Ridge Associated Universities Council
- ◆ Science and Technology Partnership Committee of Oak Ridge Associated Universities
- ◆ Served as the Texas A&M University representative for the Government, Industry and University Research Roundtable (GUIRR), Washington, DC.
- ◆ Texas A&M University representative to the Texas Society for Biomedical Research
- ◆ Board of Directors, Texas Society for Biomedical Research
- ◆ Board of Directors, Oak Ridge Associated Universities (a consortium of 100 national universities headquartered in Oak Ridge, Tennessee), elected to first term, 2000-2002
- ◆ Frequently represented Texas A&M University on the Board of Directors of the Houston Advanced Research Corporation (HARC)
- ◆ Chaired the University Advisory Committee that oversees the Texas A&M University Electron Microscopy and Imaging Center and Chaired the Hiring Committee and recruited the Director
- ◆ Instrumental in organizing "The Michael DeBakey Comparative Cardiovascular Science and Biomedical Devices Institute" at Texas A&M University in College Station, Texas
- ◆ Coordinated the organization of a new "Microencapsulation and Drug Delivery Center" by putting together components of NASA, Texas A&M and Private Industry into a cooperative new Research Center on campus to conduct basic research as well as have commercially significant applications
- ◆ Helped to coordinate an effort to set up a new computer artificial intelligence research center involving reasoning and creative activities

- ◆ Served as the Texas A&M Representative on the Bryan/College Station Chamber of Commerce to plan for “Exposition 2000”
- ◆ Traveled to China to help set up an exchange program with Nanjing Medical University and the Shanghai Institute

2001-2007 **Vice President for Research, Florida Atlantic University, Boca Raton, Florida**
Vice President for Research and Graduate Studies (2002-2006)
President of the Florida Atlantic University Research Corporation
Dean of Graduate Programs, Florida Atlantic University, Boca Raton, Florida
(2002-2006)
Professor of Biomedical Science (tenure)
Professor of Biology
Professor of Chemistry
Professor (Volunteer) of Cell Biology and Anatomy, University of Miami
Miller School of Medicine

Upon coming to Florida Atlantic University, I created a new Division of Research and Graduate Studies, incorporating the Offices of Graduate Recruitment and Admissions, Graduate Studies, Pre-Award, Post-Award, Sponsored Research, Contracts and Grants, Technology Transfer and the Florida Atlantic University Research Corporation. In addition, I initiated and helped to establish a Graduate faculty and as well as the positions of Associate Vice President for Research and Dean of Graduate Studies.

- ◆ The sponsored project funding increased more than 260% during the last five years of my tenure as the Vice President for Research at FAU (from ~\$35,000,000/year to ~\$92,000,000/year)
- ◆ Oversaw all aspects of research and graduate studies at Florida Atlantic University's seven campuses (26,000+ students)
- ◆ Oversaw offices of the Vice President for Research, Grants and Contracts, Sponsored Research, Technology Transfer, Graduate Studies, Graduate Recruitment and Admissions and the FAU Research Corporation
- ◆ Two new Ph.D. programs I promoted were approved (Integrative Biology and Educational Counseling) by the Florida Board of Education, Tallahassee (2003)
- ◆ Several new master's degree programs under my watch as Vice President for Research and Graduate Studies were approved
- ◆ Dissertation Grant Program established for graduate students
- ◆ Increased funding for tuition waivers and stipends across several Colleges at FAU
- ◆ Responsible for creating the graduate faculty at FAU
- ◆ Helped create new full-time state-funded position of Dean of Graduate Programs at FAU (working in collaboration with the Provost)
- ◆ Oversaw the 42 Research Centers at FAU
- ◆ Oversaw the development of projects for earmark or other special federal funding consideration. This includes frequent trips to Washington, D.C. to meet with U.S. Senators, Representatives and their staff members to discuss funding and other issues related to FAU.
- ◆ Served on the Florida Atlantic University President's Executive Committee where I participated in decision-making at the highest university administrative level
- ◆ Oversaw and negotiated research memoranda of understanding among FAU and other universities, governmental and private agencies and industry

- ◆ Represented Florida Atlantic University at the University Alliance for Research, Education and Technology on the Education Committee
- ◆ Represented Florida Atlantic University at the University Alliance for Research, Education and Technology on the Board of Directors
- ◆ Represented Florida Atlantic University as a Councilor of the Oak Ridge Associated Universities, Inc.
- ◆ Represented Florida Atlantic University as a National Board of Director's member for the Oak Ridge Associated Universities (re-elected to second term of National Board of Directors in 2004-2006)
- ◆ Oversaw and promoted faculty collaborations in creating interdisciplinary research project application for state, federal and private funding
- ◆ Represented Florida Atlantic University as a Board of Directors Member, Enterprise Development Corporation of South Florida
- ◆ Established and initially chaired the Intellectual Property Committee for Florida Atlantic University
- ◆ Chaired the Search Committee for the Dean of Science
- ◆ Made final decisions on patents that the University would support through the Technology Transfer Office
- ◆ Created "spin-off" companies through the Florida Atlantic University Research Corporation, Inc. to commercialize faculty members' discoveries and patents
- ◆ Served on the Board of Directors for the Florida Research and Development Authority Research Park to promote synergistic interactions between research park tenants and Florida Atlantic University
- ◆ Promoted, negotiated and facilitated interuniversity, government and industrial partnerships in research endeavors (e.g., coordinated a cooperative venture among Florida Atlantic University, Harbor Branch Oceanographic Institute (Private) and the Smithsonian Institution (Federal) to obtain \$10 million in State funding; promoted several other similar partnerships. This \$10 million initiative was funded in December, 2003, and has since leveraged an additional \$32 million and spun out 4 start-up companies.
- ◆ Gave numerous speeches to numerous local groups (University Club, Rotary Club, Zonta Club, American Heart Association, Faculty Club, etc.) as well as visitors to the FAU Campus and Research Park about scholarly activities at FAU
- ◆ Traveled to Japan to set up international research collaborations and exchange programs for faculty and students
- ◆ Coordinated Centers of Excellence applications for the State of Florida Research Commission
- ◆ Executive Committee Member, Board of Directors for State of Florida Research Consortium (2002-2007)
- ◆ Established faculty enhancement programs to fund various research initiatives and to stimulate research activities at FAU
- ◆ Served as Administrative Head and Principal Investigator of \$10,000,000 State of Florida Center of Excellence Grant (only 3 awarded in state out of 16 applications). (Note: this grant yielded more than \$32,000,000 in leveraged additional funding during my tenure at FAU).
- ◆ Created a new position at FAU for the Associate Vice President for Research
- ◆ Worked closely with Governor Jeb Bush's Economic Development Group and President Brogan of FAU to help bring Scripps Research Institute to the FAU Campus in Palm Beach County and to help establish major affiliations with FAU (joint faculty appointments, joint grants, FAU graduate students and postdoctoral fellows, etc.).
- ◆ Responsible for FAU affiliations with the University of Florida and Nova Southeastern University to form a consortium with the United States Geological Survey (USGS) in South Florida
- ◆ Served as State of Florida Governor's appointee to the Board of Directors for the Institute for Human and Machine Cognition (IHMC)

- ◆ Oversaw initial negotiation trip for State of Florida and FAU faculty/staff to visit Scripps in San Diego to set up collaborations with Scripps for the new Scripps Institute in Florida
- ◆ Worked with local and national lobbyists and Congress to bring more than \$28,000,000 in federal appropriation funding to FAU
- ◆ Speaker and panelist for trade/research mission to Germany and Switzerland with Governor Jeb Bush and Enterprise Florida to set up collaborations with University of Basel, Switzerland and the Max Planck Institute, Germany. Was instrumental in helping to bring a Max Planck Institute to the Florida Atlantic University campus in Jupiter, Florida.
- ◆ Trade/research mission to United Kingdom with Governor Jeb Bush and Enterprise Florida to set up collaboration with Oxford University, Cambridge University, Imperial College, London, and the University of Edinburgh
- ◆ Coordinator, Florida State University System, Vice Presidents for Research Committee to evaluate research avenues for universities in Florida
- ◆ State-wide Co-Chair of Summit and Master of Ceremonies for the Keynote Luncheon Lecturer for the Florida Center for Universal Research to Eradicate Disease (CURED), Meeting of the Minds—Research for New Insights and Innovative Cures
- ◆ International Board of Governor's Appointee to the IBM Latin American Grid (LA Grid) for the advancement of Latinos from the USA, Spain, South America and Mexico in computer science and engineering
- ◆ Traveled to India to set up collaboration and exchange programs between FAU and several universities in India including the Indian Institute of Technology in New Delhi, Nirma University, the University of Rajasthan, Deepshika College of Technology, Mahatma Gandhi Medical College and Hospital, and several others
- ◆ Traveled with the Florida Israel Institute and Enterprise Florida to Israel to set up collaboration and exchange programs with several universities and institutes including the Weizmann Institute of Science, University of Haifa, Ben-Gurion University and others

2007-2009 Senior Vice President for Research and Strategic Initiatives, Temple University, Philadelphia, Pennsylvania
Professor, Department of Anatomy and Cell Biology
Professor, Department of Biology
Member, Cardiovascular Research Center

- ◆ Oversaw all aspects of research at Temple University
- ◆ Served on the Promotion and Tenure Committee
- ◆ Served on the Faculty Leave Committee
- ◆ Co-chaired the Research Infrastructure Group of the Academic Planning Committee to develop the strategic plan for Temple University
- ◆ Developed a reorganization and budget plan for the Office of Senior Vice President for Research and Strategic Initiatives
- ◆ Served on the Philadelphia Science Center Board of Directors
- ◆ Served on the KIZ (Keystone Innovative Zone) Board of Directors
- ◆ Served on the Bio Strategy Partners Board of Directors
- ◆ Served on Philadelphia Biotechnology and Life Sciences Institute Board of Directors
- ◆ Served on the Institute for Human and Machine Cognition (IHMC), Pensacola, FL, Science Advisory Committee
- ◆ Expanded Technology Transfer Office to Office of Technology Transfer and Entrepreneurship

- ◆ Conducted search for and hired Director for Technology Transfer Operations and Entrepreneurship
- ◆ Appointed a new Executive Assistant/Coordinator
- ◆ Participated in “Temple on the Road” in Los Angeles, New York, Harrisburg, Washington, DC
- ◆ Significantly expanded the Office of Technology Transfer and Strategic Initiatives
- ◆ Established Technology Transfer Industry Advisory Committee (TTIAC) composed of experts outside of the university (CEOs, CFOs, entrepreneurs, etc.) to serve as advisors on technology transfer and entrepreneurship activities
- ◆ Established the Committee of Associate Deans, a university-level committee composed of the college-level Associate Deans for Research, to act as liaisons between the Colleges and the Office of Research and Strategic Initiatives as well as an advisory committee
- ◆ Oversaw the development of projects for earmark or other special federal funding consideration. This included frequent trips to Washington, D.C. to meet with U.S. Senators, Representatives and their staff members to discuss funding and other issues related to Temple.
- ◆ Served on Temple University President’s Executive Committee where I participated in decision-making at the highest university administrative level
- ◆ Coordinated development of interdisciplinary proposals
- ◆ Participated in review and selection of lobbying firm to represent Temple
- ◆ Frequently met with federal and state agency representatives (i.e.—NIH, NSF, Department of Energy, etc.)
- ◆ Met with non-Temple individuals, groups or private agencies to discuss research interests
- ◆ Hosted group from Mahatma Gandhi Medical University and arranged to have Temple Deans visit India to set up collaborations
- ◆ Hosted faculty and administrative group from City College of New York to set up collaborations with Temple
- ◆ Set up and chaired six different interdisciplinary workshops with Temple faculty to promote collaborative interactions among faculty with similar interests from the different disciplines. This formed a basis for several major federal appropriation and federal agency proposals.
- ◆ Attended numerous networking events
- ◆ Worked with the Office of Communications and Media Relations to promote dissemination of information about Temple research
- ◆ Oversaw and provided training on research and compliance issues to university faculty, students and staff
- ◆ My office developed and established electronic research administration throughout Temple University.
- ◆ My office provided electronic research administration training (eRA@TU training).
- ◆ Offered Temple Research Flash, the electronic bi-weekly research newsletter sent to all faculty, graduate students and select administrative staff
- ◆ My office developed an electronic research magazine published quarterly.
- ◆ My office wrote and produced the annual research publication for the university “Focus on Research”.
- ◆ Gave speeches and presentations to various groups inside and outside of the university to showcase research at Temple University
- ◆ J&J Biotech Symposium PowerPoint presentation and panel discussant
- ◆ Division provided information sessions and workshops on grant writing and entrepreneurship
- ◆ Invited and hosted representatives from NSF, NIH and other agencies to present workshops on grant writing and funding opportunities

- ◆ Served as panel chair and moderator at Women in Medicine’s “How to Grow a Research Center in Clinical and Basic Science”. My office arranged for NIH and NSF Directors to come to be on panel.
- ◆ Made opening and concluding remarks to site visit team and participated in various meetings for the AAALAC site visit which resulted in full international accreditation of Temple’s Animal Resources Center
- ◆ Established the Temple University “Faculty Research, Scholarly and Creative Awards Program” to stimulate new externally fundable projects
- ◆ Established the Temple University “Faculty Bridge Grant Program” for faculty members between grants to increase the likelihood of success in renewal grant applications
- ◆ Instituted university-wide “Temple Research Week” to feature research, scholarly and creative activities across the university. Organized many events including the 2008 Nobel Laureate in Chemistry, Dr. Martin Chalfie, as Keynote Speaker.
- ◆ Created the Temple “Creative Arts, Research and Scholarship Program (CARAS)” in collaboration with the Provost’s Office and the Deans. This new program, instituted in 2009, was designed to fund undergraduate research projects so that undergraduate and professional students have the opportunity to work on research, scholarly and creative works with individual faculty mentors.
- ◆ Initiated the development of the “Temple University Venture Center” to spin out new start-up companies and guide these companies through successful development
- ◆ Proposed the development of a business incubator in vacant space in Temple’s former Dental School Building
- ◆ Made presentation at University-Industry-NSF joint meeting to have Temple take lead on NSF grants to promote university/industry collaborations. The NSF selected Temple as the funded Center.
- ◆ Made presentation at NIH-NCI site visit team for the Center for Asian Health Grant
- ◆ Made presentation at SILC site team visit by NSF; grant was funded for 5 years at a total value of \$18 million dollars
- ◆ Proposed the creation of the “Temple University Outstanding Scholars” program to honor outstanding faculty members for their research, scholarly and creative contributions
- ◆ Made presentations to the Ben Franklin Technology Authority of Pennsylvania—a \$1.6 million dollar grant was awarded for faculty research

2009-2012 Provost and Vice President for Academic Affairs, Texas A&M University-Commerce, Commerce, Texas
Professor, Department of Biological and Environmental Science

- ◆ Oversaw all aspects of Academic Affairs at Texas A&M University-Commerce
- ◆ Created two new Colleges at Texas A&M University-Commerce
- ◆ Supervised:
 - Dean of Science, Engineering and Agriculture
 - Dean of Humanities, Social Sciences and Arts
 - Dean of Business and Entrepreneurship
 - Dean of Education and Human Services
 - Vice Provost for Research and Dean of Graduate Studies
 - Director of the Library
 - Associate Provost for Administration and Chief of Staff
 - Associate Provost for Institutional Effectiveness and Planning
 - Associate Vice President for Global Initiatives

- Associate Vice President for Diversity and Equal Opportunity
- ◆ Created new Department of Nursing at Texas A&M University-Commerce
- ◆ Participated in the Chief Academic Officer meetings for Texas A&M University system
- ◆ Participated in the Board of Regents meetings for Texas A&M University system
- ◆ Hosted a monthly “Open Forum with the Provost” for general discussion of university issues
- ◆ Hosted monthly Department Head Luncheons to discuss university-wide administration issues
- ◆ Participated in making periodic power point presentations at the “University Update” for the entire university community
- ◆ Proposed and led the efforts through the appointment of a task force to analyze the efficacy of creating two new colleges at Texas A&M University-Commerce
- ◆ Led efforts to establish Multiple Institution Teaching Center (MITC) with Tarleton State University and Navarro Community College
- ◆ Working with the President, established policy at the university of having a Graduate Student speaker at each graduate commencement
- ◆ Led efforts to develop a new Construction Engineering Program
- ◆ Led efforts to establish new MS program in Computational Science
- ◆ Helped to lead efforts to develop a new center and multi-track Ph.D. program in Computational Science
- ◆ Led efforts to develop new Master of Arts/Science Degree Program in Applied Criminology
- ◆ Led efforts to develop new Master of Science Degree Program in Accounting
- ◆ Led efforts to develop new Bachelor of General Studies Degree Program
- ◆ Led efforts to develop new Master of Science Degree Program in The Art of Teaching
- ◆ Initiated and led efforts to create a new Bachelor of Science Degree in Nursing at TAMU-Commerce (to begin January 2013)
- ◆ Led effort to change appointments of qualified library staff to Library Faculty status
- ◆ Led efforts and served on the initial Texas Higher Education Coordinating Board Task Force to plan the Texas Affordable Baccalaureate degree program (in progress) (TAMU-Commerce is now on a grant subcontract to develop this program.)
- ◆ Keynote speaker, Phi Delta Kappa Annual Banquet, Rockwall, TX (May, 2010)
- ◆ Plenary keynote speaker, Society for Design and Process Science International Conference, Dallas, TX (June, 2010)
- ◆ Established and host annually the Provost Outstanding Research Award Program for university
- ◆ Established and host each semester a ceremony for the Texas A&M University System Teaching Excellence Awards
- ◆ Participated in setting up international instructional programs and exchange programs
- ◆ Proposed and led efforts to create the new College of Science, Engineering and Agriculture (CSEA) at Texas A&M-Commerce
- ◆ Recruited and appointed an interim Dean and more recently via a national search a permanent Dean for the College of Science, Engineering and Agriculture
- ◆ Proposed and led efforts to create the new College of Humanities, Social Sciences and Arts (CHSSA) at Texas A&M University-Commerce
- ◆ Recruited and appointed an interim Dean and more recently via a national search a new permanent Dean of the College of Humanities, Social Sciences and Arts
- ◆ Created the new position of Associate Vice President for Global Programs and recruited an outstanding individual to fill this position

- ◆ Created the new position of Associate Vice President for Diversity and Equal Opportunity and nationally recruited an outstanding individual to fill this position
- ◆ Created the new position of Vice Provost for Research and Dean of Graduate Studies and nationally recruited an outstanding individual to fill this position
- ◆ Created the new position of Associate Provost for Institutional Effectiveness and Planning and nationally recruited an outstanding individual to fill this position
- ◆ Initiated the expansion of the A&M Commerce Equine Sciences Program to include the building of a new covered riding arena
- ◆ Expanded the Equine Sciences Program with the intent of offering an undergraduate major in Equine Sciences
- ◆ Promoted an effort to establish a competitive Collegiate Rodeo Team at the University.
- ◆ Established over 30 new permanent faculty lines to accommodate the rapid growth in enrollment of Texas A&M University-Commerce over the last two years as Provost

2012-2013 Founding Executive Director and Chief Research Officer, Division of Research, Texas A&M University-Commerce, Commerce, Texas
Professor, Department of Biological and Environmental Sciences

Charged to create a new Office of Research and Sponsored Programs to move Texas A&M University-Commerce to a top-level regional university in research productivity, funding and research stature. Successfully accomplished this undertaking, established a new Associate Provost for Research and Sponsored Programs position and filled this position through a national search.

2013-2015 Distinguished Research Professor and Head, Department of Biological and Environmental Sciences

In charge of advancing and expanding the Department and upgrading the teaching and research programs.

- ◆ Hired 5 new tenure-track faculty
- ◆ Fostered development of BioPride Program to have new freshmen Biological Sciences majors come to the university a week before classes to get an intense orientation on being successful
- ◆ Gained approval for and fostered the development of a Galapagos Island summer graduate and undergraduate course which began Summer, 2015
- ◆ Worked with administrators to help propose and plan the creation and building of a new Nursing and Health Science Center Building on the Texas A&M University-Commerce Campus. This new state-of-the-art building was approved, funded and now built on our campus. The third (top) floor was designed to contain a new biomedical laboratory to house the Biomedical Institute for Regenerative Research (BIRR).
- ◆ Submitted a patent application to Texas A&M University System entitled "A Unique RNA from Human Heart Induces the Formation of Cardiac Muscle from Nonmuscle Cells." (T0660.70021US00) which has now issued.
- ◆ Created a spin-out company, NeoHeart LLC, through the Texas Secretary of State to commercialize the findings relevant to the above project
- ◆ Have been appointed the Founding Director for the new Biomedical Institute for Regenerative Research.

2015-present Distinguished Research Professor, Department of Biological and Environmental Sciences and

Founder/Director for the new Biomedical Institute for Regenerative Research

- ◆ Established new Biomedical Institute for Regenerative Research (BIRR) at TAMUC
- ◆ Hired four world-class faculty members to join the BIRR
- ◆ Received \$1,600,000 Chancellor's Research Initiative Award to begin funding the BIRR
- ◆ Set up a new BIRR Excellent Fund to receive donations for support through the TAMUC Foundation and College of Science and Engineering
- ◆ BIRR attracted 9 new graduate students and 18 undergraduate students to participate in Honors Thesis and related research in cardiovascular regenerative biology
- ◆ Have purchased over \$1,000,000 in state-of-the-art equipment to do cutting edge research in the BIRR
- ◆ Have designed the third floor of the new Nursing and Health Sciences Building to house the BIRR.

2016-present Appointed as Texas A&M University System Regents Professor

- ◆ Keynote Speaker at Texas A&M University – Commerce Spring 2017 Convocation
- ◆ Given numerous Keynote addresses, lectures and seminars to various groups on and off campus and around the world describing our new technology to repair damaged heart tissue using regenerative medical techniques

2019-present Named Eminent Faculty Scholar, Texas A&M University-Commerce

UNIVERSITY COMMITTEE ASSIGNMENTS

- ◆ University of California, San Francisco
 - Student Welfare Committee (Member)
 - Academic Senate (Member)
- ◆ University of Wisconsin
 - Executive Committee (Member)
 - Space Committee (Member)
 - Seminar Committee (Chairperson)
 - Medical Student Orientation Facilitator (Chairperson)
 - Chairman's Ad Hoc Committee (Member) - to re-evaluate departmental mission
 - Graduate Admissions Committee (Member)
 - Teaching Assistantship Committee (Member)
 - Pathology and Laboratory Medicine Departmental Chairperson Search Committee (Member)
 - Departmental Research Committee (Chairperson)
 - Medical School Faculty Awards Committee (Member)
 - Medical School Student Awards Committee (Member)
- ◆ State University of New York, Health Science Center
 - University Space Utilization Committee (Chair)
 - Institutional Review Board for Protection of Human Subjects (Member)
 - First Year Grades Committee (Member, Chairperson)
 - Student Academic Promotions Committee (Member)
 - Task Force for Curriculum Revision (Member)
 - Pediatric Chairman Search Committee (Member)
 - Pharmacology Chairman Search Committee (Chairperson)
 - Finance and Facilities Committee (Member)
 - Presidents Executive Council (Member)
 - Presidential Inauguration Committee (Member)

Teaching and Research Program Planning Committee (Chairperson)
 Urology Chairperson Search Committee (Member)
 Cell and Molecular Biology Director Search Committee (Chairperson)
 Neuroscience Program Director Search Committee (Member)
 Presidents Long-Range Planning-Steering Committee (Member)
 College of Medicine Executive Committee (Member)
 Tenure and Promotions Committee (Member)
 Graduate Council (Member)
 Medical Student Applicant Interview Committee (Member)
 Family Medicine Chairperson Search Committee (Member)
 SUNY Distinguished Professorship Selection Committee (Member)
 Physiology Steering Committee and Chair Search Committee (Chairperson)
 Obstetrics and Gynecology Chair Search Committee (Member)

◆ Texas A&M University

Interdisciplinary Planning and Oversight Committee (Ex Officio Member)
 Research Infrastructure Committee (Ex Officio Member)
 Committee to Ensure and Project the Quality of Texas A&M University (Chair)
 College of Medicine Task Force to Examine Research Issues Special Relationship with Texas A&M University (Member)
 Vision 2020 Committee, Graduate Studies Working Theme Group (Facilitator)
 Search Committee for Associate Dean for Research, College of Veterinary Medicine (Member)
 University Electron Microscopy and Imaging Center Advisory Committee (Chair)
 Program Review Committee to Evaluate the Race and Ethnic Studies Institute at Texas A&M (Chair)
 Scholarly and Creative Faculty Enhancement Program (Chair)
 Energy Resources Research Committee, State of Texas (Chair)
 Interdisciplinary Research Committee Enhancement Program (Chair)
 Texas Research University Forum (TRUF) (Member, Coordinator)

◆ Florida Atlantic University

Search Committee for the Dean of Science (Chair)
 Special Committee to evaluate possible misconduct (Chair)
 President's Executive Committee (Member)
 President's Cabinet (Member)
 Intellectual Property Committee (Chair)
 President's Commission on Diversity (Member)
 Silver Jubilee (Member)
 Advisory Group for the FAU Athletic Director Search (Member)
 Search Committee for the Provost
 Co-Chair (with Provost) of Subcommittee on Research for Strategic Plan
 Chair, American Heart Association Walk-a-thon for FAU

◆ Temple University

Tenure and Promotion Committee
 Faculty Leave Committee
 Research Infrastructure Group of the Academic Planning Committee (Co-Chair)
 President's Cabinet (Member)

◆ Texas A&M University-Commerce

President's Advisory Committee (Member)
 Deans' Council (Chair)

University Executive Committee (Member)
 Faculty Recruitment and Retention Task Force (Texas A&M University System Central Administration)
 University Strategic Leadership Team (Chair)
 College of Science and Engineering Executive Committee (Member)
 Departmental Ad Hoc Full Professors Promotion Committee (Chair)
 Nursing and Health Sciences New Building Planning Committee (Member)—Approved and funded 2015
 Texas A&M University System Regents Scholar Review Committee

FUNDRAISING/FUND GETTING (excludes personal research grant awards which are listed on pages 31-35)

◆ Dr. Camillo Benzo Memorial Fund	\$28,000
◆ Chair of FAU American Heart Association Walkathon	\$14,000
◆ SUNY Graduate Research Initiative	\$1,200,000
◆ Matching Fund Private Donor Gift for Endowed Chair	\$1,050,000
◆ Coordinated and served as Principal Offeror on Florida Center of Excellence Application in Medical and Marine Biotechnology	\$10,000,000
◆ Principal Offeror on Florida Center of Excellence application in Ocean Energy Technology	\$5,000,000
◆ Coordinator of Earmark and related government agency funding during last four years at Florida Atlantic University	\$28,000,000
◆ Established Office of Corporate Relations in the Division of Research at Florida Atlantic University to promote advancement for Research Enterprise	
◆ Research funding at Florida Atlantic more than tripled during my tenure as VP for Research (from \$30,000,000 to more than \$92,000,000/year)	
◆ Involved in fundraising and developing federal appropriation funding requests at Temple University	
◆ Participated in Temple University faculty member receiving state funding for environmental projects	\$5,000,000
◆ Participated in Temple University faculty member receiving state funding for water resource environment research	\$1,600,000
◆ Administrative sponsor for the NSF Industry University Cooperative Research Center Program Grant awarded to faculty member for Water and Technology Center at Temple University	\$500,000
◆ Participated in Congressional Directed appropriation to Texas A&M University-Commerce	\$800,000
◆ Participated in acquiring gifts to Texas A&M-Commerce from the L-3 Corporation	\$25,000
◆ Participated in acquiring gifts for Biological and Environmental Sciences Excellence Fund	\$ 2,000
◆ Served as PI and writer for the Chancellor's Research Initiative Award for TAMU-Commerce	\$1,600,000
◆ Have very recently set up a Biomedical Institute for Regenerative Research Excellent Fund through Texas A&M-Commerce Foundation	\$ 3,350

TRAINING GRANT/PROGRAM MEMBERSHIP

- ◆ Developmental Biology NIH Training Grant Faculty, University of Wisconsin
- ◆ Cellular and Molecular Biology NIH Training Grant Faculty, University of Wisconsin
- ◆ Director, Cell and Molecular Biology Training Program, State University of New York Health Science Center at Syracuse
- ◆ Program Director, American Heart Association Medical Student Research Fellowship Program, State University of New York Health Science Center at Syracuse
- ◆ Executive Committee, Cell and Molecular Training Program, State University of New York Health Science Center at Syracuse
- ◆ Cardiovascular Biology Training Grant application, College of Medicine, The Texas A&M System Health Science Center, College Station

PROFESSIONAL SERVICE

- ◆ Manuscript referee for the following journals:
 - Asian Journal of Science (American editor)
 - CRC Press, Inc., Book Proposal Reviews
 - Developmental Biology
 - Science
 - International Scanning Electron Microscopy Symposium
 - Canadian Journal of Experimental Zoology
 - Tissue and Cell
 - Journal of Cell Biology
 - Journal of Experimental Zoology
 - Scanning Electron Microscopy
 - Experimental Cell Research
 - Anatomical Record
 - American Journal of Anatomy
 - Journal of Morphology
 - Acta Anatomica
 - Proceedings of the National Academy of Science
 - Journal of Biological Chemistry
 - Anatomy and Embryology
 - MDmedica (International Editorial Board)
 - American Editor, Asian Journal of Experimental Sciences
 - Advances in Genomics and Genetics
 - Cell Health and Cytoskeleton
 - Research Reports in Clinical Cardiology
 - Stem Cells and Cloning: Advances and Applications

- ◆ Grant Reviewer Service for the following organizations:
 - National Institutes of Health (NHLBI) Regular Study Section Member
 - National Foundation March of Dimes
 - National Science Foundation
 - Bay Area Heart Association, San Francisco, California
 - National Institutes of Health
 - American Heart Association of Wisconsin
 - American Heart Associate (New York Affiliate)
 - American Heart Association (Florida Affiliate)

National Veteran's Administration Regular Substantive Reviewer
 NIH Directors Roadmap Review Committee
 Arizona Disease Control

American Heart Association (Past National Review Panel Co-Chair)
 American Heart Association (Past National Review Panel Chair)
 Austrian National Science (Biological and Medical Sciences)

- ◆ Entrepreneurial Judge of Business Pitches for the Raymond Ideas Challenge, Texas A&M University College of Business McFerrin Center for Entrepreneurship, College Station, TX
- ◆ National Symposium Organizing Committee, Electron Microscopy Society of America
- ◆ Program Committee, Electron Microscopy Society of America
- ◆ Research Committee, American Heart Association of Wisconsin
- ◆ NIH Scientific Review Groups, Cardiovascular Diseases (ad hoc) and several special Study Sections for RFAs (ad hoc)
- ◆ Member, American Society for Cell Biology United States Congressional Liaison Committee for Scientific Research
- ◆ Member, Cardiovascular A Study Section, National Institutes of Health, Bethesda, Maryland
- ◆ Vice President, The Society of the Sigma Xi, Scientific Research Society, Syracuse Chapter
- ◆ President, The Society of the Sigma Xi, Scientific Research Society, Syracuse Chapter
- ◆ Advocacy Research Coordinator, 25th U.S. Congressional District, American Society for Cell Biology United States
- ◆ U.S. Congressional Liaison Committee of the American Society for Cell Biology for National Scientific Research
- ◆ Member, American Heart Association Peer Review Panel, New York State Affiliate
- ◆ Member, Research Committee, American Heart Association, New York State Affiliate
- ◆ Member, National Curriculum Committee, American Association of Anatomy, Cell Biology and Neurobiology Chairpersons
- ◆ Northeastern Region Delegate, National Meeting, Society for the Sigma Xi
- ◆ Teller, National Meeting, Society for the Sigma Xi, New Orleans
- ◆ Chairperson, Special Study Section, National Institutes of Health
- ◆ Executive Council, Association of Anatomy, Cell Biology and Neurobiology Chairpersons
- ◆ NIH Mock Study Section Panel, FASEB Meeting, San Francisco, California
- ◆ Government, University, Industry Research Roundtable (Texas A&M University College Station representative)
- ◆ Texas Society for Biomedical Research (Board of Directors)
- ◆ Oak Ridge Associated Universities Councilor (Texas A&M University, College Station and Florida Atlantic University, Boca Raton)
- ◆ Member, Technical Review Panel, Cancer and Smoking Disease Research Program, State of Nebraska
- ◆ Member, Review Panel, Arizona Disease Control Research Commission, Phoenix, AZ
- ◆ Oak Ridge Associated Universities (National Board of Directors)
- ◆ National Public Affairs Committee, American Association of Anatomists
- ◆ Enterprise Development Corporation of South Florida (Board of Directors)
- ◆ University Alliance for Research, Education and Technology (National Board of Directors)
- ◆ Internet Coast, Inc. (Board of Director)
- ◆ American Heart Association (Florida/Puerto Rico Affiliate) Peer Review Committee
- ◆ American Heart Association (Florida/Puerto Rico Affiliate) Research Committee
- ◆ American Heart Association Annual Gala Committee (Boca Raton)

- ◆ Institute for Human and Machine Cognition (Board of Directors—State of Florida Governor Appointee)
- ◆ American Heart Association Walk-a-thon for FAU (Chair)
- ◆ NIH Director's Roadmap Peer Review Panel Member to review National Center Grant applications
- ◆ Enterprise Florida/Team Florida—speaker and panelist for trade/research mission to Germany and Switzerland with Governor Jeb Bush and Enterprise Florida
- ◆ Enterprise Florida member for trade/research mission to The United Kingdom
- ◆ Florida Council on Universal Research to Eradicate Disease (Summit Co-chair)
- ◆ IBM Latin American Grid (International Board of Governors)
- ◆ Institute for Human and Machine Cognition (Science Advisory Committee)
- ◆ Saudi Arabia National Energy Grant Program (Reviewer)
- ◆ Philadelphia Science Center (Board of Directors)
- ◆ Keystone Innovation Zone (Board of Directors)
- ◆ Bio Strategy Partners (Board of Directors)
- ◆ MDMedica Journal (International Editorial Board)
- ◆ Texas Council of Chief Academic Officers (Member)
- ◆ Texas A&M University Chief Academic Officers (Member)
- ◆ Texas Common Course Numbering System (Board of Directors)
- ◆ National American Heart Association Peer Review Committee (Past Chair, Co-Chair and Member)
- ◆ National Institutes of Health Peer Review Committee – National Center Grant Reviews (Member)
- ◆ Biomed Communication—(International Editorial Board)
- ◆ Hearts (International Editorial Board)

MILITARY, SOCIAL AND COMMUNITY ACTIVITIES

- ◆ Active and reserve military service as a United States Army Enlisted Man and Commissioned Officer
- ◆ Discussed heart research on nationally syndicated radio program "Man and Molecules," originating in Washington, D.C.
- ◆ Boy Scouts of America Volunteer Leader. Served as Troop Committee Chairman, Assistant Scoutmaster, Scoutmaster, District Training Committee Chairman, Council Training Chairman (responsible for the training of all Boy and Cub Scout Leaders in the Syracuse and surrounding metropolitan area)
- ◆ Served on the Executive Board of the Boy Scouts of America, Hiawatha Council, Syracuse, New York
- ◆ Served on the National Jamboree Physical Arrangements Staff in Fort A.P. Hill, Virginia, led three 50-100 mile high adventure wilderness treks through the Adirondack Mountains, Sabattis, New York and two through the Boy Scout National High Adventure Base in the Rocky Mountains at Philmont, New Mexico. Also, served as an Adult Volunteer Leader at the Boy Scout National Order of the Arrow Conference in Bloomington, Indiana
- ◆ Honors as a volunteer scouter include: The Scouters Key, District Award of Merit, Outstanding Troop Committee Chairman Award (from Kiwanis Club), Woodbadge Training Award
- ◆ Board of Directors, Hiawatha Council, Boy Scouts of America
- ◆ Master Mason (Third Degree)
- ◆ Palm Beach County Business Development Board Biotechnology Task Force
- ◆ Boca Raton Roundtable
- ◆ Chair, American Heart Association Annual Heart Walk at Florida Atlantic University
- ◆ Member of Community Garden Club, Commerce, Texas

- ◆ Discussed research activities on KETR Radio, Texas A&M University-Commerce, Texas
- ◆ Presented Graduate Commencement Address at Texas A&M University-Commerce, Texas
- ◆ Presented Keynote Lecture at the Annual Meeting of the Texas Association of High School Biology Teachers
- ◆ Presented Keynote Address at the Northern Texas University Graduate Research Forum, Texas Woman's University
- ◆ Presented Keynote Lecture at the Annual Student Chemistry Association Award Dinner, Texas A&M University-Commerce
- ◆ Presented "Ted's Talks" for the Henrietta Lacks University Students' Symposium, Texas A&M University-Commerce
- ◆ Presented brief speech at the "Topping Out" ceremony for the new Nursing and Health Sciences Building

TEACHING EXPERIENCE

- ◆ General Zoology, 5 cr. Teaching Assistant, Department of Zoology - Arizona State University (two semesters and one summer)
- ◆ Anatomy and Physiology, 4 cr. Teaching Assistant, Department of Zoology - Arizona State University (2 semesters)
- ◆ Embryology, 4 cr. Guest Faculty, Department of Zoology - Arizona State University. Course director (summer)
- ◆ Theory and Methods in Electron Microscopy, 2 cr. Department of Biology - University of Pennsylvania (2 summers)
- ◆ Developmental Biology, 3 cr. Department of Biology – University of Pennsylvania. Responsible for 2 weeks teaching of organ culture techniques
- ◆ Medical Histology, 6 cr. Department of Anatomy - University of California, San Francisco
- ◆ Medical Endocrinology, 4 cr. Departments of Anatomy and Biochemistry - University of California, San Francisco. Responsible for teaching histology of endocrine organs
- ◆ Pharmacy Gross Human Anatomy, 4 cr. - University of California, San Francisco
- ◆ Guest lectures in Human Anatomy for nurses and Muscle Biology, 3 cr. - University of Wisconsin, Madison
- ◆ Medical Gross Human Anatomy, 8 cr. Department of Anatomy - University of Wisconsin, Madison
- ◆ Medical Gross Human Anatomy, 9 cr. Department of Anatomy and Cell Biology - State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Cell Biology, 1 cr. Department of Anatomy and Cell Biology State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Embryology, 1 cr. Department of Anatomy and Cell Biology State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Cell and Molecular Biology, 3 cr. Departments of Anatomy and Cell Biology and Biochemistry and Molecular Biology – State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Advanced Cell and Molecular Biology, Cell and Molecular Biology Program - State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Advanced Topics in Embryology and Developmental Biology, Department of Anatomy and Cell Biology - State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Molecular and Cellular Mechanisms of Development, Department of Anatomy and Cell Biology, State University of New York Health Science Center at Syracuse, Syracuse, New York

- ◆ Medicine and Society, College of Medicine, State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Contemporary Cellular, Molecular and Developmental Biology, 3 cr., Department of Anatomy and Cell Biology, State University of New York Health Science Center at Syracuse, Syracuse, New York
- ◆ Molecular Biology of the Cardiovascular System for Graduate Students, College of Medicine, Department of Medical Physiology, The Texas A&M University System Health Science Center, College Station
- ◆ Occasional lectures in courses in College of Science, Florida Atlantic University
- ◆ Independent Study course and Undergraduate Honors Thesis Advisor, College of Science, Florida Atlantic University
- ◆ Graduate student Advisement (Major Professor) for 5 graduate students and 3 Postdoctoral Fellows
- ◆ Supervision of work-study students at Temple University
- ◆ Supervision of work-study students at Texas A&M University-Commerce
- ◆ Supervision of several undergraduate honors theses students at Texas A&M University-Commerce (students participated in several publications and patent applications as inventors)
- ◆ Histology, Texas A&M University-Commerce
- ◆ Epigenetics, Texas A&M University-Commerce
- ◆ Developmental Biology, Texas A&M University-Commerce (on line with Camtasia Video Lecture Series currently on YouTube)
- ◆ Histology, Texas A&M University-Commerce (on line)
- ◆ Graduate Research Literature and Techniques, Texas A&M University-Commerce (on line)

SPONSORSHIP OF STUDENTS, POSTDOCTORAL FELLOWS AND VISITING SCIENTISTS

Undergraduate and Medical Students Trained:

Have had more than 200 undergraduate and/or medical students work with me over the years

Graduate Students Trained:

- Craig Hill, Ph.D., received a Postdoctoral Fellowship at the Max Plank Institute in Goetingen, Germany. Dr. Hill became Director of Research at Hybriteck Inc. in California.
- Rebecca Fuldner, Ph.D., began work with me and completed her Ph.D. degree after I left Wisconsin. She went to the NIH as a Postdoctoral Fellow. She is currently the Chief of the Aging Physiology Branch of the National Institute of Aging at the NIH.
- Sui Mai Wong, Ph.D., began her work with me and completed her Ph.D. degree after I left Wisconsin. She joined the faculty of the National Taiwan University, where she is currently a Professor.
- Dino Messina, M.D., Ph.D., after completing the M.D./Ph.D. degrees, went to do a Residency in Internal Medicine and Cardiology at the University of Pittsburgh and a physician and lecturer at St. Elizabeth's Hospital in Boston, MA, affiliated with Tufts University. He is currently an associate program director for the Internal Medicine Residency Program and physician in the Internal Medicine Center at Memorial Hospital of Rhode Island.
- Guan-Ren Hou, M.S., became Director of Allied Health Services, Harvard University.
- Christine Makhuli, M.S., became Director of Public Relations with a pharmaceutical firm.
- Jian Li, M.D., Ph.D., is currently an Associate Professor at Harvard University.
- Willie Underwood, M.D., M.S., became a resident in Urology at the University of Massachusetts. He is currently Associate Clinical Director of RPCI Referring Physician and Patient/Family Experience Initiatives, Roswell Park Cancer Institute, State University of New York at Buffalo.

- Pei-Shen Shen, M.D., Ph.D., completed the Ph.D. and went to Harvard School of Public Health for Postdoctoral training. She currently works in the biotech industry near San Francisco.
- Sherrie LaFrance, Ph.D., completed the Ph.D. degree and went to Harvard Medical School to do her Postdoctoral research study. She is now on the faculty of the College of Medicine at Upstate Medical University, Syracuse, NY.
- Nihan Erginel-Unaltuna, Ph.D., completed the Ph.D. degree and spent five additional months in my laboratory as a Postdoctoral Fellow. She then went to a Postdoctoral Research Fellowship at Bristol-Myers-Squibb Research Center in Princeton, New Jersey. She is currently a Professor and Chairperson at the University of Istanbul, Turkey. She also started a private genetics diagnostic laboratory called “GenKlinik” in Turkey.
- Eileen Luque, M.D., Ph.D., completed the Ph.D and went to Yale University College of Medicine as a Postdoctoral Research Fellow. Currently she is a Pediatric Physician in Florence, S.C..
- Simone Ward, Ph.D., Minority Fellowship recipient for her Ph.D. degree training, accepted a Postdoctoral Research Fellowship at Harvard Medical School and currently is on the research faculty at Harvard Medical School.
- Yan Wang, M.S., went to get a Ph.D. at Columbia University.
- Arun Gaur, Ph.D. completed the Ph.D. and went to Rutgers University to do Postdoctoral research study. He is currently a senior scientist in the QC department at Imclone Systems in New Jersey.
- Kathleen Pietras, M.S., completed the M.S. Degree and planned to pursue a Physician's Assistant degree.
- Sharon Luster, M.D., a Minority Fellowship recipient for her Ph.D. training, accepted a medical Residency in Surgery at the University of Minnesota. She is currently a surgeon in Minneapolis, MN.
- Robert Zajdel, Ph.D., currently an Assistant Professor at the SUNY HSC at Syracuse.
- Belinda Spinner, Ph.D., is Director of Medical Education at EMD Serono.
- Chi Zhang, Ph.D., received Ph.D. degree from Texas A&M University with me, served as a Research Assistant Professor at Florida Atlantic University, received his M.D. from the University of Miami Miller School of Medicine and currently is an Assistant Professor of Radiation Oncology at the University of Nebraska Medical Center in Omaha.
- Gian Franco Sferrazza, M.S. completed the M.S. degree in my laboratory and is employed by the Scripps Biomedical Research Institute, Jupiter, Florida.
- Saira Hussain did an undergraduate honor’s thesis in my laboratory in Biomedical Science, received the OD degree and is practicing medicine in New York City.
- PingPing Jia, M.S. completed the M.S. degree and is employed by the University of Miami Miller School of Medicine.
- Jennifer Maier, M.S. completed the M.S. degree in Integrative Biology, received a Ph.D. degree at the University of Florida and is doing a postdoc at the University of Illinois.
- Elena Rueda-de-León, M.S. completed the M.S. degree in Integrative Biology, received her M.D. from Florida International University and is now a Pediatric Cardiology Fellow at Monroe Carell Jr Children’s Hospital at Vanderbilt.
- Alyssa Stassi, B.S. completed the M.S. degree in Biomedical Science, received her OD and is practicing medicine in Columbus, Ohio.
- Ashley Moses, B.S. with Highest Honors (TAMUC), completed medical school and is now a Resident Physician at Baylor Scott & White Medical Center, Temple, TX.
- Jessica Meyer, B.S. with High Honors (TAMUC) completed medical school and now is a Resident Physician at Texas A&M University, College Station, TX.
- Will Lian, B.S. with High Honors (TAMUC) completed medical school and is doing a residency at the University of Texas Southwestern Medical School, Dallas.

- Lena Mitchell, B.S. with Honors (TAMUC), completed B.S. degree and is a PA student at St. Mary's, New Mexico.
- Allyson Davis B.S., with Honors (TAMUC) completed B.S. degree and is currently attending medical school at the University of Texas Medical Branch Galveston.
- Halie Fetters B.S., with Honors (TAMUC), completed B.S. degree and currently attends Veterinary School at Texas A&M University.
- Nick Scarceli (TAMUC), Undergraduate student working in research laboratory.
- Michael Neal (TAMUC), McNair Scholar undergraduate student and Graduate Student. Completed B.S. degree with High Honors and M.S. degree and is currently employed by Thermo Fisher Scientific in California.
- Kaitlin Shahankary (TAMUC), Undergraduate student worked in research laboratory.
- Noor Faisal, B.S. with High Honors (TAMUC) currently attending Veterinary School at TAMU-College Station.
- Pipasha Biswas, M.S. Graduate Student (TAMUC) plans to do Ph.D. degree.
- Priya Biswas, M.S. Graduate Student (TAMUC) plans to do Ph.D. degree.
- Jewel Ross Ferguson, M.S. Graduate Student (TAMUC) plans to go to dental school.
- Matthew Gonzales, M.S. Graduate Student (TAMUC) plans to go to medical school.

Postdoctoral Fellows/Visiting Scholars/Research Faculty:

- Parris Kidd, Ph.D., received the Ph.D. at Berkeley University and worked in my laboratory while at the University of California, San Francisco. He studied the histochemistry of heart development and succeeded in winning the Bay Area Heart Association Outstanding Researcher Award while in my laboratory. He also was awarded an American Heart Association Postdoctoral Fellowship.
- Zeng Hong Tu, M.S., M.D., was a Visiting Scholar from China, did Postdoctoral work in my laboratory for three years and studied tissue culture of hamster heart cells. Currently he is a Professor at the Institute of Materia Medica, Shanghai, China.
- Pamela B. Moore, Ph.D., received the Ph.D. from Oklahoma State University, came to work in my laboratory at the University of Wisconsin where she spent three years doing biochemistry on contractile proteins and developing hearts. She went on to the research faculty at Rockefeller University, New York.
- Soo-siang Lim-Spiker, Ph.D., received the Ph.D. from the University of South Dakota, came to my laboratory at the University of Wisconsin and spent three years working on chick heart development looking at the biochemistry of contractile proteins during development. She is currently Lead Program Director and Chair of the Coordinating Committee of the Science of Learning Center Program at the National Science Foundation.
- M. Nicola Woodroffe, Ph.D., came from the University of London to do postdoctoral training in my laboratory. Her research included studying actin in the axolotl heart and contractile proteins in the chick heart. She is currently the Head of the Biomedical Research Centre at Sheffield Hallam University in the United Kingdom.
- Lynn A. Davis, Ph.D., received her Ph.D. at the University of Virginia. She came to the University of Wisconsin, spent a year doing Postdoctoral work on heart development in the axolotl and then moved with me to SUNY in Syracuse where she continued for an additional two years funded by an NSF Fellowship. She became Associate Dean of Students at the University of Virginia, Charlottesville and Director of the Echols Program.
- Yuji Isobe, M.D., Ph.D., came from Chiba University in Japan where he received the M.D. and Ph.D. degrees. He spent four years in my laboratory as a Postdoctoral Fellow and Research Associate

working on the immunoelectron microscopy of contractile proteins in developing hamster heart cells in culture. He is currently affiliated with the University Hospital in Chiba, Japan.

- Margaret Fransen, Ph.D., began postdoctoral work in my laboratory after receiving her Ph.D. from the University of North Carolina and having done a Postdoctoral Fellowship in our Biochemistry Department. She spent several years as a Postdoctoral Fellow. She spent several years as a Postdoctoral Fellow and currently works at Syracuse Research Corporation.
- Hanna Osinska, Ph.D., received her Ph.D. at Warsaw University in Poland in cell biology and biochemistry. She came here and worked for several years as a Postdoctoral Fellow studying heart development in culture using immunohistochemical methods. She was a research associate for several years at the SUNY Health Science Center and has relocated to the University of Cincinnati.
- Sherrie LaFrance, Ph.D., after completing her Ph.D., spent an additional six months in my laboratory studying the molecular biology of heart development. She went on to Harvard Medical School to do Postdoctoral work. She is now on the faculty of the College of Medicine at Upstate Medical University, Syracuse, NY. Nihan Erginel-Unaltuna, Ph.D., spent five months in my laboratory after completing her Ph.D. and was looking at the molecular biology of a new protein, which she had discovered during her graduate training. She was a Postdoctoral Fellow at Bristol-Myers-Squibb and now is a Professor and Chairperson at the University of Istanbul, Turkey. She also started a private genetics diagnostic laboratory called “GenKlinik” in Turkey.
- John Armstrong, Ph.D., spent a year in my laboratory as a Visiting Scientist from Canada and studied electron microscopy and biochemistry of heart development in the axolotl and hamster. He served as a Professor of Zoology, University of Ottawa.
- Yongze Zhu, M.D., a Visiting Scholar from China, is spending three years studying heart cell culture in the axolotl with respect to the appearance of intermediate filament proteins. He is currently Professor and Chair of Anatomy at Yanhtza University, China.
- Abdul Zanabli, M.D., received his M.D. in Syria and spent a year doing Postdoctoral work in my laboratory and learning cell and molecular biology techniques as it relates to heart development. He moved on to an Internal Medicine residency in Chicago and is practicing in Charleston, WV.
- Azmi Draw, M.D., also from Syria, worked with me on the molecular biology of contractile proteins and went on to a residency in Michigan. He is a physician in Louisville, Kentucky.
- Rajula Bhatia, Ph.D., received her Ph.D. from the University of Toledo, Ohio, and studied molecular biology of a unique RNA that rescues and promotes myofibrillogenesis in cardiac mutant axolotl hearts. She is working as a senior scientist with the Functional Genomics group at Aventis Pharma.
- Anne Rosa McDonald, Ph.D., received her Ph.D. from the University of London, did work as an American Heart Association Postdoctoral fellow in my laboratory and is working at Syracuse Research Corporation, Syracuse, New York.
- Robert J. Zajdel, Ph.D., received a Ph.D. at the SUNY Health Science Center in Syracuse. He was an American Heart Association Postdoctoral fellow in my laboratory and is now a Research Assistant Professor at SUNY, Syracuse.
- Dalton Foster, Ph.D., received his Ph.D. from the SUNY Health Science Center in Syracuse and subsequently performed research at the Center for Blood Research at the Harvard Medical School as a Postdoctoral Research Associate. He attended medical school at Upstate Medical University in Syracuse, New York and is currently a physician in Houston, TX.
- Fanyin Meng, M.D., received his M.D. from China, spent three years as a Postdoctoral Fellow in my laboratory at Texas A&M and is currently an Associate Professor at the Ohio State University.
- Xupe Huang, M.D.; Ph.D., was a Research Assistant Professor (non-tenure track) working on molecular biology in my laboratory at Texas A&M University. He is presently an Full Professor with tenure at Florida Atlantic University.

- Qing Li, M.D., was a Postdoctoral Fellow in my laboratory at Texas A&M University. She is a Research Scientist in industry in Bethesda, Maryland.
- Chi Zhang, Ph.D., was a Postdoctoral Fellow in my laboratory at Florida Atlantic University and was a Research Assistant Professor in the Cellular and Developmental Biology Institute at Florida Atlantic University. He attended the University of Miami Medical School, was a Resident Physician at Columbia University/New York Presbyterian Hospital and currently is a tenured Associate Professor in the Department of Radiation Oncology, The Fred & Pamela Buffett Cancer Center, University of Nebraska Medical Center, Omaha, Nebraska.
- Fahri Akbas, Ph.D., received his Ph.D. at the University of Istanbul in Turkey. He was a Postdoctoral Fellow in my laboratory at Florida Atlantic University and has returned to the University of Istanbul.
- Gagani Athauda, M.D. received her M.D. from the University of Latvia and was a Postdoctoral Fellow and Research Assistant Professor in my laboratory. She is now a faculty member at the University of Miami Miller School of Medicine.
- Jikui Wang, Ph.D. worked as a postdoctoral fellow in my laboratory at Temple University. He is now a faculty member at the University of Virginia.
- Andrei Kochegarov, Ph.D. is a Postdoctoral Research Associate, Research Assistant Professor in my laboratory at Texas A&M University-Commerce funded by my National Science Foundation Grant. He left to accept a position as a Project Director at the UCLA College of Medicine.
- Lan Hong, M.D., Ph.D., was a Postdoctoral Research Associate and a Research Assistant Professor in the BIRR at TAMUC and is now an Assistant Professor at Yanbian University, China.

Committee Member of Graduate Students (TAMUC)

Ashjan Khalel
 Anne Davenport
 Ashley Arms
 Megan Miller
 Sravan Vermuri
 William Latson
 Alexis Bivona
 Simbarashe Mazambani
 Nobel Chowdhury
 Madeline Morris

Graduate Thesis Advisor (TAMUC)

Matthew Gonzales
 Michael Neal
 Jewel Ross-Ferguson
 Priya Biswas
 Pipasha Biswas
 Curtis Ivory
 Tearah Mcrac-Kee

Honors Thesis Advisor (TAMUC)

Ashley Moses-Arms
 Jessica Meyers
 William Lian
 Allyson Davis
 Halie Fetters

Lena Mitchell
Michael Neal
Noor Faisal
Justin Rusk

AREA OF RESEARCH INTEREST

My main research interests concern a study of myofibrillogenesis and heart inductive processes in developing embryonic hearts at the cell and molecular levels. Immunofluorescent and confocal microscopy, biochemistry, molecular biology and tissue culture methods are used in the studies. We are currently studying cardiac mutant axolotls, transgenic mice and induced pluripotent adult stem cells. Our goals are to elucidate the sequence of events and mechanism(s) of myofibrillogenesis and to explain how inductive interactions direct heart differentiation at the cellular and gene levels. We recently have discovered unique and specific ribonucleic acids (RNAs) that have the capacity to promote cardiac myofibrillogenesis in nonmuscle cells. We are pursuing the mechanism of this exciting and intriguing phenomenon and we are exploring inducing heart muscle repair in hearts damaged from disease processes such as myocardial infarctions (heart attacks). This research program has been funded by the National Institutes of Health and the American Heart Association. Two patents for the sequence and action for RNAs have been issued by the U.S. Patent Office. This research shows great promise for being able to treat patients who have suffered from heart attacks or other disease processes that affect heart muscle function by replacing the damaged, diseased heart cells with vigorously contracting new muscle tissue. In the future, patients treated using this approach might be able to return to pre-heart-attack activity levels.

EXTRAMURAL RESEARCH SUPPORT AWARDS

Title: Genetic Cardiomyopathies in Salamanders
Amount Received: \$160,000
Date: 04/01/76 - 03/30/79
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: NIH

Title: Genetic Cardiomyopathies in Salamanders (Dual application of above grant)
Amount Received: \$80,000
Date: 04/01/76 - 07/01/78
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: NSF

Title: Myogenesis in Cardiomyopathic Salamanders and Hamsters
Amount Received: \$49,500
Date: 07/01/76 - 06/30/79
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Congenital Cardiomyopathies in Vertebrates
Amount Received: \$10,500
Date: 01/01/80 - 12/31/80
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Genetic Cardiomyopathies in Vertebrates
Amount Received: \$186,000
Date: 04/01/79 - 03/31/82
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: NIH

Title: Established Investigatorship Award
Amount Received: 75% of salary for P.I. for five years
Date: 07/01/76 - 06/30/81
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Myogenesis in Cardiac Non-Function Axolotls and Cardiomyopathic Hamsters
Amount Received: \$40,000
Date: 07/01/80 - 06/30/82
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: National Foundation March of Dimes

Title: Heart Development in Cardiac Mutant Salamanders
Amount Received: \$12,000
Date: 01/01/81 - 12/31/81
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Heart Development in Cardiac Mutant Salamanders
Amount Received: \$10,000
Date: 01/01/82 - 12/31/82
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Immunofluorescent Studies of Myofibrillogenesis
Amount Received: \$25,000
Date: 01/30/84 - 02/01/85
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: Hendricks Foundation

Title: Heart Development in Cardiomyopathic Hamsters
Amount Received: \$99,000
Date: 01/01/82 - 06/30/85
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Heart Induction in Axolotls
Amount Received: \$40,000
Date: 10/01/83 - 09/30/85
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: Muscular Dystrophy Association

Title: Cardiac Myofibrillogenesis and Heart Induction
Amount Received: \$118,948
Date: 01/01/86 - 12/30/86
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Myofibrillogenesis and Immunoelectron Microscopy
Amount Received: \$25,000
Date: 07/01/86 - 06/30/87
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Genetic Cardiomyopathies in Vertebrates
Amount Received: \$534,924
Date: 04/01/83 - 03/31/88
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: NIH

Title: Reichert-Jung Cryofract 190 with Cryoblock (DRR-BRS Shared Instrumentation Grant)
Amount Received: \$124,000
Date: 12/01/87 - 11/30/88
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: NIH

Title: Molecular Mechanisms of Heart Induction and Myofibrillogenesis
Amount Received: \$90,000
Date: 07/01/88 - 06/30/91
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Research Equipment Grant
Amount Received: \$130,000
Date: 01/01/91 - 12/31/91
Role in Obtaining Grant: Internal University Application
Name of Granting Agency: New York State University Equipment Fund for Laser Confocal Scanning Microscope

Title: Intercellular Communication and Impulse Propagation
Amount Received: \$803,400
Date: 12/01/89 - 11/30/94
Role in Obtaining Grant: Core-Leader (Dr. Jose Jalife, PI)
Name of Granting Agency: NIH

Title: Molecular Biology of Heart Induction in Mutant Axolotls
Amount Received: \$90,000
Date: 07/01/92 - 06/30/95
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Medical Student Research Fellowship Program
Amount Received: \$171,000
Date: 7/1/86 - 6/30/96
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association (National)

Title: Intercellular Communication and Impulse Propagation (Continuation of above PPG)
Amount Received: \$850,000
Date: 12/01/94 - 11/30/99
Role in Obtaining Grant: Consultant (Dr. Jose Jalife, PI)
Name of Granting Agency: NIH

Title: Cellular and Molecular Mechanisms of Heart Development
Amount Received: \$529,858
Date: 08/01/93 - 07/31/98
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: NIH

Title: Investigation of a Novel Protein Associated with Heart Development
Amount Received: \$70,000
Date: 07/01/97-06/30/99
Role in Obtaining Grant: Postdoctoral Fellowship Sponsor (for Anne R. McDonald)
Name of Granting Agency: American Heart Association

Title: Characterization of a Novel RNA that Promotes Myofibrillogenesis
Amount Received: \$60,000
Date: 07/01/96-06/30/98
Role in Obtaining Grant: Postdoctoral Fellowship Sponsor (for Dr. Rajula Bhatia)
Name of Granting Agency: American Heart Association

Title: Cellular and Molecular Mechanisms of Heart Development
Amount Received: \$90,000
Date: 07/01/96 - 06/30/99
Role in Obtaining Grant: Principal Investigator
Name of Granting Agency: American Heart Association

Title: Rescue of Cardiac Mutant Axolotl Hearts by Ectopic Expression of a Novel RNA and Tropomyosin
Amount Received: \$70,000
Date: 07/01/97-06/30/99
Role in Obtaining Grant: Postdoctoral Fellowship Sponsor (for Robert Zajdel)
Name of Granting Agency: American Heart Association

Title: Studies on a Novel RNA that Promotes Heart Development
Amount: \$1,591,950 (Total Costs)
Date: 01/01/98-12/30/02
Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: NIH

Title: A Novel Protein Associated with Heart Development

Amount: \$1,206,642 (Total Costs)

Date: 07/01/97 - 06/30/06

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: NIH

Title: Vertebrate Heart Specification and Myofibrillogenesis During Early Embryogenesis

Amount: \$120,000

Date: 07/01/02-06/30/05

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: Christine B. Lynn American Heart Association Grant-in-Aid

Title: Center of Excellence on Medical and Marine Biotechnology

Amount: \$10,000,000

Date: 07/01/03-01/30/05

Role in Obtaining Grant: Principal Offeror (Principal Investigator)

Name of Granting Agency: State of Florida

Title: Center of Excellence in Ocean Energy Technology

Amount: \$5,000,000

Date: 2006

Role in Obtaining Grant: Principal Offeror

Name of Granting Agency: State of Florida

Title: Studies on a Novel RNA that Promotes Heart Development

Amount: \$1,500,000 (Total costs)

Date: 04/01/03-01/31/10

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: NIH

Title: A Novel Cardiac Myofibril-Inducing RNA

Amount: \$139,700

Date: 07/01/10-06/30/13

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: American Heart Association

Title: RUI: Elucidation of Maspardin Function and its Role in the Endocytic Pathway

Amount: \$448,672

Date: 12/01/11-11/30/16

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: National Science Foundation

Title: An RNA from Human Heart Promotes Cardiac Myogenesis (ACTIVE)

Amount: \$140,000

Date: 7/1/15-6/30/18

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: American Heart Association

Title: Creation of the Biomedical Institute for Regenerative Research –Chancellor’s Research Initiative (ACTIVE)

Amount: \$1,600,000

Date: 3/1/16-2/28/19

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: Texas A&M University System

Title: Human RNA that Converts iPS Cells and Fibroblasts into Cardiac Myocytes (ACTIVE)

Amount: \$154,000

Date: 01/01/19-12/31/20

Role in Obtaining Grant: Principal Investigator

Name of Granting Agency: American Heart Association

PATENTS

Promoting Cardiac Cell Differentiation (US Issued Patent [9/18/07] 60/462 171)—Dr. Larry Lemanski (80%) and Dr. Chi Zhang (20%): Patent Issued

Cardiac Myofibril Induction (US Issued Patent [7/31/19] 16/527,629)—Dr. Larry Lemanski (Lead Inventor, 70%), Dr. Andrei Kochegarov (15%) and Ms. Ashley M. Moses (15%): Patent Issued

INVITED NATIONAL AND INTERNATIONAL LECTURES/CONFERENCES/KEYNOTE SPEECHES (Partial List)

- ◆ Second International Symposium of the Muscular Dystrophy Association on Exploratory Concepts in Muscular Dystrophy. (Invited speaker and invited paper). Carefree, AZ
- ◆ International Symposium on The Biochemistry of Smooth Muscle. (Invited paper with A.V. Somlyo, F. Ashton, J. Vallieres and A.P. Somlyo). Montreal, Canada
- ◆ ICN-UCLA Winter Conference on Molecular and Cellular Biology. (Invited paper for Symposium Volume)
- ◆ International Symposium on Developmental Genetics. (Invited speaker and invited paper). Toronto, Canada
- ◆ March of Dimes International Symposium on Birth Defects. (Invited speaker and invited paper). Grand Canyon, AZ
- ◆ Established Investigators Meeting of the American Heart Association (Invited speaker). Charleston, SC
- ◆ American Heart Association-National Organization Annual Meeting (Invited speaker). Dallas, TX
- ◆ Annual Symposium of the New York Society for Electron Microscopy (Invited speaker). New York, NY
- ◆ Electron Microscopy Society of America. (Invited symposium chairman and speaker). Atlanta, GA
- ◆ VII International Conference: Defined Immunofluorescence, Immunoenzyme Studies and Related Labeling Techniques (Invited speaker). Niagara Falls, NY
- ◆ First International Symposium on Contractile Proteins in Muscle and Non-Muscle Cell Systems (Invited speaker and invited papers). Sassari, Italy
- ◆ NIH Workshop on Molecular Biology and the Cardiovascular System (Invited participant). Chantilly, VA
- ◆ Tenth Yamada Conference on Cell Motility II (Invited presentation). Nagoya, Japan

- ◆ Third International Congress on Cell Biology (Participant). Tokyo, Japan
- ◆ XII International Anatomical Congress, London, England
- ◆ Annual Symposium of Scanning Electron Microscopy, Inc. (Invited Presentation and Paper)
Hamilton, Ontario, Canada
- ◆ Biology of Isolated Adult Cardiac Myocytes. (Invited Presentation and Paper). Asilomar, California
- ◆ ICN-UCLA Winter Conference on Molecular and Cellular Biology of Muscle Development
Steamboat Springs, Colorado (Invited Presentation and Paper)
- ◆ VIII International Symposium on Morphological Sciences. Rome, Italy (Invited Presentation and
Paper)
- ◆ New York Academy of Science, Congress on Embryonic Origins of Defective Heart Development
(Presentation and Paper)
- ◆ Keystone Symposium on Molecular Mechanisms of Cardiac Growth and Hypertrophy, Keystone,
Colorado
- ◆ Conference on Molecular Biology of Development, Arlie, Virginia (Presentation)
- ◆ Fifth International Congress on Cell Biology, Madrid, Spain. (Invited Presentation)
- ◆ International Workshop on the Molecular Biology of Urodeles, Indianapolis, Indiana
- ◆ (Invited Presentation and Symposium "Provocateur")
- ◆ Syracuse Microscopy Colloquium, Syracuse, New York (Invited Symposium Speaker)
- ◆ Cardiac Morphogenesis Conference, Charleston, South Carolina (Invited Presentation)
- ◆ Midwestern Society for Electron Microscopy, University of Iowa, Iowa City, Iowa (Invited
Symposium Speaker)
- ◆ Symposium on the Molecular Biology of Cardiac Development, San Francisco, California (Invited
Symposium Speaker)
- ◆ American Heart Association, Conference on Cellular and Molecular aspects of Development, New
Orleans
- ◆ Weinstein Cardiovascular Development Conference, Philadelphia, Pennsylvania
- ◆ NIH Cardiovascular Development Conference, Philadelphia, Pennsylvania (Invited Speaker)
- ◆ Federation of the American Society for Experimental Biology and Medicine (FASEB), New Orleans,
Louisiana (Invited Minisymposium Chairman and Speaker)
- ◆ Cardiovascular Development Symposium, St. Petersburg, Russia (Invited Symposium Speaker and
Invited Review Manuscript)
- ◆ Microscopy Society of America, Chicago, Illinois (Invited Symposium Speaker and two Invited
Review Manuscripts)
- ◆ Baylor College of Dentistry "Student Research Day", "An Overview of Research at Texas A&M and
the Future of Biomedical Research in Universities" (Keynote Speaker)
- ◆ Intercultural Development Across the Border II: A Research and Cultural Exchange Between the U.S.
and Mexico, Vera Cruz and Xalapa, Mexico (Invited Speaker)
- ◆ Texas A&M University System Health Science Center Faculty Research Retreat,
"Bioscience Research at Texas A&M" (Invited Speaker)
- ◆ 6th Annual Meeting of the International Society for Heart Research, Chinese Section (ISHR),
Nanjing, China (Invited Keynote Speaker)
- ◆ Myofibrillogenesis Symposium, Special Interest Group, American Society for Cell Biology Meeting,
Washington, D.C., (Invited Speaker)
- ◆ Overview of Research at Florida Atlantic University, College of Engineering, Tokoshima University,
Japan (Invited Speaker)
- ◆ Research Symposium on Medical Bioscience, Tokoshima, Japan (Invited Symposium Speaker)

- ◆ XVIII World Congress of the International Society for Heart Research (ISHR), Brisbane, Australia (Symposium Chair and speaker)
- ◆ Enterprise Florida Trade Mission panel in Germany and Switzerland (Presenter and panel co-chair)
- ◆ Enterprise Florida Governor's Trade/Research Mission to the United Kingdom
- ◆ LA Grid Symposium, Barcelona, Spain
- ◆ GovSec, U.S. Law and Ready! Liaison Committee, Summit on Intermodal Transportation, Washington, D.C. (invited speaker and session moderator)
- ◆ Deepshika University, Jaipur, India
- ◆ Nirma University, Ahmedabad, India
- ◆ Indian Institutes of Technology, New Delhi, India
- ◆ Mahatma Gandhi Medical College and Hospital, Jaipur, India
- ◆ Monterey Technical University, Mexico City, Mexico
- ◆ Newsmakers at Noon Luncheon Speaker and Panel Moderator, U.S. Congress (hosted by U.S. Representative Ron Klein, Florida), Washington, DC
- ◆ Ben-Gurion University of the Negev, Beersheba, Israel
- ◆ University of Edinburg, Scotland
- ◆ Institution of Mechanical Engineers, London, UK
- ◆ New and Renewable Energy Center, Newcastle University, UK
- ◆ International Society for Design and Process Science, Dallas, TX (Invited Keynote Speaker)
- ◆ Phi Delta Kappa Annual Meeting, Rockwall TX (Keynote Speaker)
- ◆ XIIth International Seminar on Globalization of Higher Education, New Delhi, India (Invited Keynote Speaker)
- ◆ Society for Design and Process Science (International)- Plenary Keynote Speaker-Jeju Island, Korea (2011)
- ◆ Keynote Speaker-Inaugural Session, XIII International Seminar on Ethics, Morality and Spirituality, Delhi, India (2012)
- ◆ Keynote Speaker and Session Chairman, Nirma Conference on Management, Ahmedabad, India (2012)
- ◆ Society for Design and Process Science (International)- Plenary Keynote Speaker, Berlin, Germany (2012)
- ◆ Graduate Commencement Address, Texas A&M University-Commerce (2014)
- ◆ Keynote Speaker, Texas Society for High School Biological Sciences Teachers Annual Meeting, Dallas, TX (2014)
- ◆ Keynote Speaker, Federation of North Texas Area Universities, Denton, TX (2016)
- ◆ Keynote Speaker, The 6th Congress of Asia-Pacific Pediatric Cardiology Society, Shanghai, China (2016)
- ◆ Keynote Speaker, Cell and Molecular Biology Program, Florida Atlantic University, Boca Raton, Florida (2017)

INVITED RESEARCH SEMINAR SPEAKER (Partial List)

Cell Biology Institute, Arizona State University
 Cardiovascular Research Unit, University of Pennsylvania
 Muscle Biology Institute University of Pennsylvania
 Biochemical Laboratories, University of Pennsylvania
 Department of Anatomy, University of Pennsylvania
 Department of Anatomy, University of California, San Francisco

Department of Zoology, Louisiana State University
Department of Zoology, University of California, Berkeley
Department of Zoology, University of Alabama
Division of Medical and Biological Sciences, Brown University
Department of Anatomy and Physiology, Indiana University
Pennsylvania Muscle Biology Institute, University of Pennsylvania
Division of Cellular Biology, San Francisco Veterans Administration Medical Center
National Heart and Lung Institute, National Institutes of Health
Department of Anatomy, Columbia University
Department of Anatomy, Southern Illinois University
Department of Anatomy, University of Arizona
Department of Anatomy, Temple University
Department of Anatomy, University of Wisconsin, Madison
Electron Microscopy Group, University of California, Berkeley
Department of Anatomy and Physiology, University of California, Berkeley
Department of Biology, California State University, San Diego
Department of Muscle Biology, University of Wisconsin, Madison
Department of Anatomy, Duke University
Department of Anatomy, Medical College of South Carolina
Department of Biology, University of Virginia
Department of Zoology, Developmental Biology Group, University of Wisconsin, Madison
Department of Anatomy, University of Miami
Department of Anatomy, University of North Carolina
Division of Biological Sciences, Oakland University
Department of Anatomy, Medical College of Wisconsin, Milwaukee
Department of Pharmacology, University of Wisconsin
Department of Anatomy, Texas Tech University
Department of Anatomy, Upstate Medical Center
Department of Pathology, University of Wisconsin
Department of Anatomy, University of Texas Medical Branch, Galveston
Department of Biology, Utica College, New York
Department of Anatomy and Cell Biology, State University of New York
Health Science Center at Brooklyn
Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, Maryland
College of Graduate Studies, University of Alabama, Birmingham
Department of Biology, Indiana University, Bloomington
Department of Medical Sciences, Indiana University/Notre Dame, South Bend, Indiana
Department of Anatomy, University of Iowa, Iowa City
Department of Anatomy, University of Florida, Gainesville
Department of Anatomy and Cell Biology, Uniformed Services Health Sciences University,
Bethesda, Maryland
Department of Physiology, SUNY Health Science Center, Syracuse, New York
College of Medicine, University of Missouri, Columbia, Missouri
Department of Physiology and Biophysics, State University of New York, Buffalo, New York
Department of Medical Physiology, Texas A&M University, College Station, Texas
Department of Pharmacology and Toxicology, Texas A&M University, College Station, Texas
Nanjing Medical University, Nanjing, China
Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai, China

Deepshika University, Jaipur, India
 Mahatma Gandhi Medical College, Jaipur, India
 Nirma University, Ahmedabad, India
 Indian Institutes of Technology, New Delhi, India
 Monterey Technical University, Mexico City, Mexico
 Ben-Gurion University of the Negev, Beersheba, Israel
 Department of Biological and Environmental Sciences, Texas A&M University-Commerce
 Department of Biomedical Sciences, Florida Atlantic University, Boca Raton, Florida
 Yanbian University Hospital, Yanji, China (visit scheduled for 2018)
 Tianjin Hospital, Tianjin, China (visit scheduled for 2018)

PUBLICATIONS

Refereed Journal Articles

- Lemanski, L.F. and E.M. Bertke 1970 Histology and ultrastructure of untreated forty-eight hour canine renal transplants. *J. Exp. Zool.*, 174: 287-308.
- Lemanski, L.F. 1973 Heart development in the Mexican salamander, *Ambystoma mexicanum*. I. Gross anatomy, histology and histochemistry, *J. Morph.*, 139: 301-328.
- Lemanski, L.F. 1973 Heart development in the Mexican salamander, *Ambystoma mexicanum*. II. Ultrastructure. *Amer. J. Anat.*, 136: 487-526.
- Lemanski, L.F. 1973 Morphology of developing heart in cardiac lethal mutant Mexican axolotls, *Ambystoma mexicanum*. *Dev. Biol.*, 33: 312-333.
- Lemanski, L.F., E.P. Fitts and B.S. Marx 1976 Fine structure of the heart in the Japanese medaka, *Oryzias latipes*. *J. Ultrastructure Res.*, 53: 37-65.
- Lemanski, L.F., M.S. Mooseker, L.D. Peachey and M.R. Iyengar 1976 Studies of muscle proteins in embryonic myocardial cells of cardiac lethal mutant Mexican axolotls (*Ambystoma mexicanum*) by use of heavy meromyosin binding and sodium dodecyl sulfate polyacrylamide gel electrophoresis. *J. Cell Biol.*, 68: 375-388.
- Lemanski, L.F. 1976 Morphological and biochemical abnormalities in hearts of cardiac mutant salamanders (*Ambystoma mexicanum*). *J. Supramolec. Struct.*, 5: 221-238.
- Lemanski, L.F., B.S. Marx and C.S. Hill 1977 Evidence for abnormal heart induction in cardiac mutant Mexican salamanders (*Ambystoma mexicanum*). *Science*, 196: 894-896.
- Lemanski, L.F. and R. Aldoroty 1977 Role of acid phosphatase in the breakdown of yolk platelets in developing amphibian embryos. *J. Morph.*, 153: 419-426.
- Lemanski, L.F. 1978 Morphological, biochemical and immunohistochemical studies on heart development in cardiac mutant axolotl embryos (*Ambystoma mexicanum*). *Amer. Zool.* 18: 327-348.
- Lemanski, L.F., D.H. Paulson and C.S. Hill 1979 Normal anterior endoderm corrects the heart defect in cardiac mutant salamanders (*Ambystoma mexicanum*). *Science*, 204: 860-862.
- Lemanski, L.F. 1979 Role of tropomyosin in actin filament formation in embryonic salamander heart cells. *J. Cell Biol.*, 82: 227-238.
- Hill, C.S. and L.F. Lemanski 1979 Morphological studies on cardiac lethal mutant salamander hearts in organ cultures. *J. Exp. Zool.*, 209: 1-20.
- Lemanski, L.F., R.A. Fuldner and D.J. Paulson 1980 Immunofluorescence studies for myosin, alpha-actinin and tropomyosin in developing hearts of normal and cardiac lethal mutant axolotls, *Ambystoma mexicanum*. *J. Embryol. exp. Morph.*, 55: 1-15.
- Epstein, M. and L.F. Lemanski 1980 Electrical activity in cardiac mutant axolotl hearts. *J. Exp. Zool.*, 211: 131-136.

- Woodroffe, M.N. and L.F. Lemanski 1981 Two actin variants in developing axolotl hearts. *Dev. Biol.*, 82: 172-179.
- Keyhani, E. and L.F. Lemanski 1981 Mitochondrial morphology in the spermatozoa of the Mexican axolotl, *Ambystoma mexicanum*. *J. Cell Sci.*, 50: 449-461.
- Kidd, P.M., A.L. Jones, L.F. Lemanski, A. Rudolph and L. Allen 1981 Histological and electron microscopic stereological study of the myocardium of newborn genetically cardiomyopathic hamsters. *J. Ultrastruct. Res.*, 76: 107-119.
- Tu, Z.H. and L.F. Lemanski 1982 Immunofluorescent staining of myosin in cultured cardiomyopathic hamster heart cells. *Acta Pharmacol. Sin.*, 3: 68-71.
- Tu, Z.H. and L.F. Lemanski 1982 Scanning and transmission electron microscopy of dissociated normal and cardiomyopathic hamster heart cells. *Acta Pharmacol. Sin.*, 3: 117-119.
- Moore, P.B. and L.F. Lemanski 1982 A radioimmunoassay method for quantitation of alpha-tropomyosin in heart homogenates. *J. Musc. Res. and Cell Motil.*, 3: 145-160.
- Moore, P.B. and L.F. Lemanski 1982 Quantitation of tropomyosin by radioimmunoassay in hearts of cardiac mutant axolotls, *Ambystoma mexicanum*. *J. Musc. Res. and Cell Motil.*, 3: 161-167.
- Moore, P.B. and L.F. Lemanski 1982 A variant cardiac tropomyosin in the salamander, *Ambystoma mexicanum*. *Cell and Molec. Biol.*, 28: 565-569.
- Lim, S.S., M.N. Woodroffe and L.F. Lemanski 1983 An analysis of contractile proteins in developing chick heart by SDS polyacrylamide gel electrophoresis and electron microscopy. *J. Embryol. exp. Morph.*, 77: 1-14.
- Lemanski, L.F. and Z.H. Tu 1983 Immunofluorescent studies for myosin, actin, tropomyosin and alpha-actinin in cultured cardiomyopathic hamster heart cells. *Dev. Biol.*, 97: 338-348.
- Lim, S.S., Z.H. Tu and L.F. Lemanski 1984 Anti-troponin-T monoclonal antibody crossreacts with all muscle types. *J. Musc. Res. and Cell Motil.*, 5: 515-526.
- Fuldner, R.A., S.S. Lim, M.L. Greaser and L.F. Lemanski 1984 Accumulation and localization of troponin-T in developing hearts of *Ambystoma mexicanum*. *J. Embryol. exp. Morph.*, 84: 1-17.
- Lemanski, L.F., D.J. Paulson, C.S. Hill, L.A. Davis, L.C. Riles and S.S. Lim 1985 Immunoelectron microscopic localization of alpha-actinin on lowicryl-embedded thin-sectioned tissues. *J. Histochem. Cytochem.*, 33: 515-522.
- Hill, C.S. and L.F. Lemanski 1985 Immunoelectron microscopic localization of alpha-actinin and actin in embryonic hamster heart cells. *E. J. Cell Biol.*, 39: 300-312.
- Davis, L.A. and L.F. Lemanski 1987 Induction of myofibrillogenesis in cardiac lethal mutant axolotl hearts rescued by RNA derived from normal endoderm. *Development*, 99: 145-154.
- Isobe, Y., F. Warner and L.F. Lemanski 1988 Three-dimensional immunogold localization of alpha-actinin within the cytoskeletal networks of cultured cardiac muscle and non-muscle cells. *Proc. Nat. Acad. Sci.*, 85: 6758-6762.
- Fransen, M. and L.F. Lemanski 1988 Myocardial cell relationships during morphogenesis in normal and cardiac lethal mutant axolotls, *Ambystoma Mexicanum*. *Amer. J. Anat.*, 183: 245-257.
- Messina, D.A. and L.F. Lemanski 1989 Immunocytochemical studies of spectrin in hamster cardiac tissue. *Cell Motil. Cytoskel.*, 12: 139-149.
- Osinska, H. and L.F. Lemanski 1989 Immunofluorescent localization of desmin and vimentin in developing cardiac muscle of Syrian hamsters. *Anat. Rec.*, 223: 406-413.
- Starr, C., J.G. Diaz and L.F. Lemanski 1989 Analysis of actin and tropomyosin in hearts of cardiac mutant axolotls by two-dimensional gel electrophoresis, western blots and immunofluorescent microscopy. *J. Morph.*, 201: 1-10.
- Shen, P.S. and L.F. Lemanski 1989 Immunofluorescent, immunogold and electrophoretic studies for desmin in embryonic hearts of normal and cardiac mutant Mexican axolotls, *Ambystoma mexicanum*. *J. Morph.*, 201: 243-252.

- Lemanski, L.F. and T.P. Fitzharris 1989 Analysis of the endocardium and cardiac jelly in truncal development in the cardiac lethal mutant axolotl, *Ambystoma mexicanum*. *J. Morph.*, 200: 123-130.
- Fransen, M.E. and L.F. Lemanski 1990 Epicardial development in the axolotl, *Ambystoma mexicanum*. *Anat. Rec.*, 226(2): 228-236.
- Lemanski, L.F., L.A. Davis, P.S. Shen, S.M. LaFrance and M.E. Fransen 1990 Induction of myofibrillogenesis in cardiac mutant axolotls by RNA from normal embryonic endoderm. *Ann. N.Y. Acad. Sci.*, 588: 409-411.
- Li, J., D.R. Robertson and L.F. Lemanski 1990 Abnormalities in myofibril organization and cell shape in developing cardiomyopathic hamster heart cells in culture. *Ann. N.Y. Acad. Sci.*, 588: 412-416.
- Li, J. and L.F. Lemanski 1990 Immunofluorescent studies for alpha-actinin in cultured cardiomyopathic hamster heart cells. *Anat. Rec.*, 228: 46-52.
- Trombitas, K., P.H.W.W. Baatsen, J.-J.-C. Lin, L.F. Lemanski and G.H. Pollack 1990 Immunoelectron microscopic observations on tropomyosin localization in striated muscle. *J. Musc. Res. Cell Motil.*, 11: 445-452.
- Fransen, M.E. and L.F. Lemanski 1991 Extracellular matrix of the developing heart in normal and cardiac lethal mutant axolotls, *Ambystoma mexicanum*. *Anat. Rec.*, 230: 387-405.
- Messina, D.A. and L.F. Lemanski 1991 Studies of hamster cardiac myofibrillogenesis in vivo with antibodies to spectrin, desmin and alpha-actinin. *Amer. J. Anat.*, 191: 85-94.
- Isobe, Y., G.R. Hou and L.F. Lemanski 1991 Deep-etching immunogold replica electron microscopy in cytoskeletal elements in cultured hamster heart cells. *Anat. Rec.*, 229: 415-426.
- Hou, G.R., Y. Isobe and L.F. Lemanski 1991 Immunofluorescent and immunogold replica studies of desmin distribution in cultured normal and cardiomyopathic hamster heart cells. *Acta Anat.*, 142: 215-226.
- Wang, H.-Z., J. Li, L.F. Lemanski and R.D. Veenstra 1992 Gating of mammalian cardiac gap junction channels by transjunctional voltage. *Biophys. J.*, 63: 139-151.
- Lemanski, L.F., S.M. LaFrance, N. Erginel-Unaltuna, M.E. Fransen, T.K. Ray, M. Nakatsugawa, S.L. Lemanski and D.K. Dube 1992 Heart development in cardiac mutant axolotls. *Axol. Newsletter* 21: 5-11.
- Osinska, H. and L.F. Lemanski 1993 Immunofluorescent studies on Z-line associated proteins in cultured cardiomyocytes from neonatal hamsters. *Cell Tiss. Res.*, 271: 59-67.
- LaFrance, S., M. Fransen, N. Erginel-Unaltuna, D. Dube, D.R. Robertson, C. Stefanu, T. Ray and L.F. Lemanski 1993 RNA from normal anterior endoderm/mesoderm-conditioned medium stimulates myofibrillogenesis in developing mutant axolotl hearts. *Cell. Molec. Biol. Res.*, 39: 547-560.
- Trabka-Janik, E., W. Coombs, L.F. Lemanski, M. Delmar and J. Jalife 1994 Immunohistochemical localization of gap junction protein channels in hamster sinoatrial node in correlation with electrophysiologic mapping of the pacemaker region. *J. Cardiovasc. Electrophysiol.*, 5: 125-137.
- Li, J., D.R. Robertson and L.F. Lemanski 1994 Morphometric analysis of cultured normal and cardiomyopathic hamster heart cells after immunofluorescent staining for tubulin and α -actinin. *Acta Histochem.*, 96: 33-42.
- Isobe, Y., M. Nakatsugawa, G.R. Hou and L.F. Lemanski 1994 Three-dimensional distributions of desmin and vimentin in cultured hamster cardiomyocytes using the immunogold deep-etching replica technique. *Histochemistry*, 101: 155-168.
- Messina, D.A. and L.F. Lemanski 1994 Spectrin in developing normal and cardiomyopathic hamster heart. *J. Mol. Cell. Cardiol.*, 26: 937-941.
- Luque, E.A., R.D. Veenstra, E.C. Beyer and L.F. Lemanski 1994 Localization and distribution of gap junctions in normal and cardiomyopathic hamster heart. *J. Morph.*, 222: 203-213.
- Erginel-Unaltuna, N., D.K. Dube and L.F. Lemanski 1994 Protein synthesis during heart development in normal and cardiac mutant axolotls. *Axol. Newsletter*, 23: 48-60.

- Luque, E.A., L.F. Lemanski and D.K. Dube 1994 Molecular cloning, sequencing and expression of an isoform of cardiac alpha-tropomyosin from the Mexican axolotl (*Ambystoma mexicanum*). *Biochem. Biophys. Res. Com.*, 203(1): 319-325.
- Erginel-Unaltuna, N., D.K. Dube and L.F. Lemanski 1994 Molecular characterization of the conditioned medium which promotes myofibrillogenesis in cardiac mutant axolotls. *Axol. Newsletter*, 23: 39-47.
- Erginel-Unaltuna, N. and L.F. Lemanski 1994 Immunofluorescent studies on titin and myosin in developing hearts of normal and cardiac mutant axolotl. *J. Morph.*, 222: 19-32.
- Cornet, M., Y. Isobe and L.F. Lemanski 1994 Effects of antisosmotic conditions on the cytoskeletal architecture of cultured PC12 cells. *J. Morph.*, 222: 269-286.
- LaFrance, S. and L.F. Lemanski 1994 Immunofluorescent confocal analysis of tropomyosin in developing hearts of normal and cardiac mutant axolotls, *Ambystoma mexicanum*. *Int. J. Dev. Biol.*, 38: 695-700.
- Erginel-Unaltuna, N., D.K. Dube, K.G. Salsbury and L.F. Lemanski 1995 Confocal microscopy of a newly identified protein associated with heart development in the Mexican axolotl. *Cell. Molec. Biol. Res.*, 41: 117-130.
- Ward, S.M., L.F. Lemanski, N. Erginel-Unaltuna and D.K. Dube 1995 Cloning, sequencing and expression of an isoform of cardiac c-protein from the Mexican axolotl (*Ambystoma mexicanum*). *Biochem. Biophys. Res. Com.*, 213(1): 225-231.
- Gaur, A., D.K. Dube and L.F. Lemanski 1995 Cloning and expression of a homeobox (Hox A5) gene in the Mexican axolotl (*Ambystoma mexicanum*). *Axol. Newsletter*, 24: 31-38.
- Mangiacapra, F., M.E. Fransen and L.F. Lemanski 1995 Activin A and transforming growth factor- β stimulate heart formation in axolotls but do not rescue cardiac lethal mutants. *Cell Tiss. Res.*, 282(2): 227-236.
- Gaur, A., L.F. Lemanski and D.K. Dube 1995 Identification and expression of a homologue of the murine Hox A5 gene in the Mexican axolotl (*Ambystoma mexicanum*). *Gene*, 162: 249-253.
- Erginel-Unaltuna, N., D.K. Dube, D.R. Robertson and L.F. Lemanski 1995 In vivo protein synthesis in developing hearts of normal and cardiac mutant axolotls, *Ambystoma mexicanum*. *Cell. Molec. Biol. Res.*, 41: 181-187.
- Erginel-Unaltuna, N., D.K. Dube, K.G. Salsbury and L.F. Lemanski 1995 Expression of a novel protein associated with heart development in the Mexican axolotl. *Axol. Newsletter*, 24: 39-55.
- Ward, S., M.E. Fransen, D.K. Dube, D.A. Fischman and L.F. Lemanski 1995 Immunohistochemical analysis of c-protein isoforms in cardiac and skeletal muscle of the axolotl, *Ambystoma mexicanum*. *Cell Tiss. Res.*, 282(3): 399-406.
- Lemanski, L.F., S.M. LaFrance, N. Erginel-Unaltuna, E.A. Luque, S.M. Ward, M.E. Fransen, F.J. Mangiacapra, M. Nakatsugawa, S.L. Lemanski, R.B. Capone, K.J. Goggins, B.P. Nash, R. Bhatia, A. Dube, A. Gaur, R.W. Zajdel, Y. Zhu, B.J. Spinner, K.M. Pietras, S.F. Lemanski, C.P. Kovacs, X. VanArsdale, J.L. Lemanski and D.K. Dube 1995 The cardiac mutant gene c in axolotls: cellular, developmental and molecular studies (invited article). *Cell. Molec. Biol. Res.*, 41(4): 293-305.
- Ward, S.M., D.K. Dube, M.E. Fransen and L.F. Lemanski 1996 Differential expression of c-protein isoforms in the developing heart of normal and cardiac lethal mutant axolotls (*Ambystoma mexicanum*) *Dev. Dynamics*, 205(2): 93-103.
- Ward, S., B.J. Spinner, A. Dube, A. Gaur, N. Erginel-Unaltuna, L.F. Lemanski and D.K. Dube 1996 Expression of myosin heavy chain transcripts in normal and cardiac mutant Mexican axolotls. *Biochem. Molec. Biol. Int.*, 38: 113-121.
- Bhatia, R., D.K. Dube and L.F. Lemanski 1996 Nucleotide sequence and expressions of ribosomal protein S3 mRNA during embryogenesis in the Mexican axolotl (*Ambystoma mexicanum*). *Biochem. Molec. Biol. Int.*, 38: 1079-1085.

- Zajdel, R., Y. Zhu, M.E. Fransen and L.F. Lemanski 1996 A method for the isolation and culture of embryonic myocardiocytes from Mexican axolotl. *Int. J. Dev. Biol.*, 40: 907-908.
- Lemanski, L.F., M. Nakatsugawa, R. Bhatia, N. Erginel-Unaltuna, B. Spinner and D.K. Dube 1996 A specific synthetic RNA promotes cardiac myofibrillogenesis in the Mexican axolotl. *Biochem. Biophys. Res. Com.*, 229: 974-981.
- Holland, J.A., J.W. Meyer, D.K. Johnson, R.W. Abdul-Karim, V. Patel, L.M. Ziegler, L. Kauffman, K.J. Schillinger and L.F. Lemanski 1996 Protein kinase C inhibitors prevent cultured human endothelial cell stress fiber formation, but not heightened endocytosis. *Endothelium*, 4: 207-218.
- Lemanski, S.F., C.P. Kovacs and L.F. Lemanski 1997 Analysis of the three-dimensional distributions of α -actinin, ankyrin and filamin in developing hearts of normal and cardiac mutant axolotls, *Ambystoma mexicanum*. *Anat. and Embryol.*, 195: 155-163.
- Luque, E.A., B.J. Spinner, S. Dube, D.K. Dube and L.F. Lemanski 1997 Differential expression of a novel isoform of alpha-tropomyosin in cardiac and skeletal muscle of the Mexican axolotl (*Ambystoma mexicanum*). *Gene*, 185: 175-180.
- Holland, J.A., J.W. Meyer, M.E. Schmitt, M.D. Sauro, D.K. Johnson, R.W. Abdul-Karim, V. Patel, L.M. Ziegler, K.J. Schillinger, R.F. Small and L.F. Lemanski 1997 Low-density lipoprotein stimulated peroxide production and endocytosis in cultured human endothelial cells: mechanisms of action. *Endothelium*, 5: 191-207.
- Lemanski, L.F., R.W. Zajdel, M. Nakatsugawa, R. Bhatia, B.J. Spinner, M.E. Fransen, A.F. Gaur, M.D. McLean, S.L. Lemanski and D.K. Dube 1997 Molecular biology of heart development in the Mexican axolotl, *Ambystoma mexicanum*. *J. Tsitologiya (Cytology)*, 39: 918-927.
- Zajdel, R.W., Y. Zhu, M.E. Fransen and L.F. Lemanski 1997 A primary cell culture model for defective cardiac myofibrillogenesis in Mexican axolotl embryos. *In vitro Cell Dev. Biol.*, 33: 677-680.
- Gaur, A., R. Bhatia, E. Spring-Mills, L.F. Lemanski, and D.K. Dube 1998 The heart of metamorphosing Mexican axolotl but not that of the cardiac mutant is associated with the upregulation of HoxA5. *Bioch. Biophys. Res. Com.*, 245: 746-751.
- Bhatia, R., A. Gaur, L.F. Lemanski and D.K. Dube 1998 Cloning and sequencing of the cDNA for an RNA-binding protein from the Mexican axolotl: Binding affinity of the in vitro synthesized protein. *Bioch. Biophys. Acta*, 1398: 265-274.
- Gaur, A., D.K. Dube and L.F. Lemanski 1998 Cloning, sequencing and expression of a novel homeobox gene AxNox-1 from the Mexican axolotl. *Gene*, 216: 179-188.
- Zajdel, R.W., M.D. McLean, S.L. Lemanski, M. Muthuchamy, D.F. Wiczorek, L.F. Lemanski and D.K. Dube 1999 Ectopic expression of tropomyosin in cardiac mutant axolotl hearts promotes organized myofibril formation. *Dev. Dynamics*, 213: 412-420.
- Zajdel, R.W., D.K. Dube and L.F. Lemanski 1999 The cardiac mutant axolotl is a unique animal model for evaluation of cardiac myofibrillogenesis. *Expt. Cell Res.*, 248(2): 557-566.
- Bhatia, R., D.K. Dube, A. Gaur, D.R. Robertson, S.L. Lemanski, M.D. McLean and L.F. Lemanski 1999 Expression of axolotl RNA-binding protein during development of the Mexican axolotl. *Cell Tissue Res.*, 297: 283-290.
- Zajdel, R.W., M.D. McLean, G. Istamangil, L.F. Lemanski and D.K. Dube 2000 Alteration of cardiac myofibrillogenesis by liposome-mediated delivery of exogenous proteins and nucleic acids into whole embryonic hearts. *Anat. Embryol.* 201(4): 217-228.
- Huang, X., K. Lee, B. Riedel, C. Zhang, L.F. Lemanski and J.W. Walker 2000 Thyroid hormone regulates slow skeletal troponin I gene inactivation in cardiac troponin I null mouse hearts. *J. Mol. Cell Cardiol.*, 32: 2221-2228.
- Lemanski, L.F., F. Meng, S.L. Lemanski, N. Dawson, C. Zhang, Q. Li, M. Nakatsugawa, D.K. Dube and X. Huang 2001 Creation of chimeric mutant axolotls: a model to study early embryonic heart development in Mexican axolotls. *Anat. Embryol.*, 203: 335-342.

- Gaur, A., R.W. Zajdel, R. Bhatia, C. Isitmangil, C.R. Denz, D.R. Robertson, L.F. Lemanski and D.K. Dube 2001 Expression of HoxA5 in the heart is upregulated during thyroxin-induced metamorphosis in the Mexican axolotl (*Ambystoma mexicanum*). *Cardiol. Toxicol.*, 1: 225-235.
- Spinner, B.J., R.W. Zajdel, M.D. McLean, C.R. Denz, S. Dube, S. Mehta, A. Choudhury, M. Nakatsugawa, N. Dobbins, L.F. Lemanski and D.K. Dube 2002 Characterization of a TM-4 type tropomyosin that is essential for myofibrillogenesis and contractile activity in embryonic hearts of the Mexican axolotl. *J. Cell. Biochem.* 85: 747-761.
- Huang, X., J. Li, D. Foster, S.L. Lemanski, C. Zhang and L.F. Lemanski 2002 Protein kinase c mediated desmin phosphorylation is related to myofibril disarray in cardiomyopathic hamster heart. *Exper. Biol. Med.* 227: 1039-1046.
- Zhang, C., S.M.LaFrance, S.L. Lemanski, X. Huang, D.K. Dube and L.F. Lemanski 2003 Sheep heart RNA stimulates myofibril formation and beating cardiac mutant axolotl hearts in organ culture. *Anat. Embryol.* 206: 419-427.
- Meng, F., X.P. Huang, C. Zhang, R.W. Zajdel, D. Foster, N. Dawson, S.L. Lemanski, D. Zawieja, D.K. Dube and L.F. Lemanski 2003 Relationship between cardiac protein tyrosine phosphorylation and myofibrillogenesis during axolotl heart development. *Tiss Cell* 35: 133-142.
- Zhang, C., D. Dube, X. Huang, R.W. Zajdel, R. Bhatia, D. Foster, S.L. Lemanski and L.F. Lemanski 2003 A point mutation in bioactive RNA results in RNA secondary structure alteration and failure of mutant heart correction in Mexican axolotls. *Anat. Embryol.* 206: 495-506.
- Zhang, C., F. Meng, X.P. Huang, R. Zajdel, S.L. Lemanski, D. Foster, N. Erginel-Unaltuna, D.K. Dube and L.F. Lemanski 2004 Downregulation of N1 gene expression inhibits the initial heartbeating and heart development in axolotls. *Tiss. Cell*, 36: 71-81.
- Zhang, C., H.E. Oskinska, S.L. Lemanski and L.F. Lemanski 2005 Changes in myofibrils and cytoskeleton of neonatal hamster cardiomyocytes in vitro: an immunofluorescence study. *Tiss. Cell* 37: 435-445.
- Zhang, C., K.M. Pietras, G.F. Sferrazza, P. Jia, G. Athauda, E. Rueda-de-Leon, J.A. Maier, D.K. Dube, S.L. Lemanski and L.F. Lemanski 2007 Molecular and immunohistochemical analyses of cardiac troponin T gene during the cardiac development of Mexican axolotls, *Ambystoma mexicanum*, *J Cell Biochem* 100: 1-15.
- Sferrazza, G.F., C. Zhang, P. Jia, S.L. Lemanski, G. Athauda, A. Stassi, K. Halager, J.A. Maier, E. Rueda-de-Leon, A. Gupta, S. Dube, X. Huang, H.M. Prentice, D.K. Dube and L.F. Lemanski 2007 Role of myofibril-inducing RNA in cardiac TnT expression in developing Mexican axolotl. *Biochem Biophys. Res. Com.*, 357: 32-37.
- Jia, P., C. Zhang, X. Huang, M. Poda, F. Akbas, S.L. Lemanski, N. Erginel-Unaltuna and L.F. Lemanski 2008 A novel protein involved in heart development in *Ambystoma mexicanum* is localized in the endoplasmic reticulum. *J. Biomed. Sci.*, 15: 789-799.
- Zhang, C., P. Jia, X. Huang, G.F. Sferrazza, G. Athauda, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2009 Myofibril-inducing RNA (MIR) is essential for sarcomeric tropomyosin expression, the organization of myofibrils and the initiation of cardiac contractile function in Mexican axolotls during development. *J. Biomed. Sci.*, Sep 3; 16: 81 (Selection of Editor(s)-in-Chief of *Journal of Biomedical Science* as a nomination of the 4th Annual Research Awards).
- Zhang, C., P. Jia, Y. Jia, H. Weissbach, K.A. Webster, X. Huang, S.L. Lemanski, M. Achary and L.F. Lemanski 2010 Methionine sulfoxide reductase A (MsrA) protects cultured mouse embryonic stem cells from H₂O₂-mediated oxidative stress, *J. Cell Biochem.* 111 (1): 94-103 (Selected as a "Feature Article" in the *Journal of Cellular Biochemistry*).
- Zhang, C., P. Jia, Y. Jia, Y. Li, K.A. Webster, X. Huang, M. Achary, S.L. Lemanski, and L.F. Lemanski 2011 Anoxia, acidosis and intergenic interactions selectively regulate methionine sulfoxide

- reductase transcriptions in mouse embryonic stem cells. *J. Cell. Biochem.* 112: 98-106 (selected as a "Feature Article", *J. Cell Biochem*).
- Jia, P., C. Zhang, Y. Jia, K.A. Webster, X. Huang, A. Kochegarov, S.L. Lemanski, L.F. Lemanski 2011 Identification of a truncated form of methionine sulfoxide reductase A expressed in mouse embryonic stem cells. *J. Biomed. Sci.* 18:46.
- Rueda-de-Leon, E., A. Kochegarov, W. Lian, G. Athauda, C. Zhang, J. Maier, X. Huang, M.P. Achary, A. Moses, J. Meyer, J.D. Arms, S.R. Burlbaw, S.L. Lemanski, and L.F. Lemanski 2011 Human heart RNA promotes tropomyosin synthesis and myofibrillogenesis in mutant axolotl hearts. *MD-Medical Data*, 3(3): 223-227.
- Kochegarov, A., A. Moses, W. Lian, M.C. Hanna and L.F. Lemanski 2013 A new unique form of microRNA from human heart, microRNA-499c, promotes myofibril formation and rescues cardiac development in mutant axolotl embryos. *J. Biomed. Sci.*, 20(1): 20.
- Moses-Arms, A., A. Kochegarov, J. Arms, S. Burlbaw, W. Lian, J. Meyer, L.F. Lemanski. 2014. Identification of a human mitochondrial RNA that promotes tropomyosin synthesis and myocardial differentiation. *In vitro Cell. Dev. Biol. Anim.*, doi:10.1007/s11626-014-9834-2; *Bound journal* 51: 273-280.
- Kochegarov, A., A. Moses-Arms and L.F. Lemanski. 2015. A fetal human heart cardiac inducing RNA (CIR) promotes the differentiation of stem cells into cardiomyocytes. *In Vitro Cell. Dev. Biol. Animal* DOI 10.1007/s11626-015-9880-4.
- Kochegarov, A., A. Moses-Arms, M. Hanna and L.F. Lemanski. 2015. Identification of genes involved in limb regeneration in the axolotl, *Ambystoma mexicanum*. *JMS Regen Med* 3(1): 1014.
- Kochegarov, A., A. Moses-Arms, M. Hanna and L.F. Lemanski 2015 Micro RNA-499c induces the differentiation of stem cells into cardiomyocytes. *International Archives of Medicine* doi:3823/1657; Vol.8 No. 58.
- Davenport, A., A. Bivona, W. Latson, L.F. Lemanski and V. Cheriya. 2016. Loss of maspardin attenuates the growth and maturation of mouse cortical neurons. *Neurodegener. Dis.*, DOI: 10.1159/000443666.
- Kochegarov, A. and L.F. Lemanski 2016 New Trends in Heart Regeneration: A Review. *J Stem Cells Regen. Med.*, 12(2): 61-68.
- Zhao, Z., L. Hong, Y.L. Rodriguez, M.J. Eqbal and L.F. Lemanski (2018) Repair of injured cardiac tissue using human-heart RNA in rodent myocardial infarction model. *World Conference & Expo on Biomedical Engineering*, Miami, Florida.
- Jin, H., L. Hong, L. Lemanski, Z. Zhao X. Cao, H. Chi (2019) N-terminal pro-B-type natriuretic peptide as an index in patients with obesity and acute coronary syndrome. (Submitted for publication, *International Journal of Cardiology*).
- Lemanski, L.F., A. Kochegarov and M. Neal (2019) Differentiation of Mouse Embryonic Fibroblasts (MEFs) into Cardiomyocytes Using Human-Derived Cardiac Inducing RNA (CIR). (Submitted for publication)
- Yang, E., K. Gavini, L. Lyman-Henley, M. Dhanasekaran, V. Cheriya, L. Lemanski and K. Parameshwaran 2019 Maspardin interacts with Rab5 and likely regulates endosomal cycling. (Submitted for publication).
- Lemanski, L.F., C. Zhang, A. Kochegarov, X. Huang, K. Webster, and S.L. Lemanski. 2019 The induction of cardiac tissue from nonmuscle cells by RNA-A Review. *Invited Review Article (In Preparation)*
- Lemanski, L.F., A. Kochegarov, M. Neal, L. Hong, Y. Rodriguez, J. Eqbal, M. Gonazles, J. Ross-Ferguson, Pitasha Biswas, Priya Biswas 2019 Studies on a cardiac inducing RNA that transforms fibroblasts into cardiogenic cells in vitro (In Preparation)

Lemanski, L.F., M. Neal, A. Kochegarov, Z. Zhao, Y.L. Rodriguez, and Lan Hong 2019 Human heart RNAs that induce the differentiation of non-muscle cells into cardiomyocytes. (In Preparation)

Refereed Proceedings Articles

- Lemanski, L.F., J.L. Beggs and E.M. Bertke 1970 Microtubules and microfilaments in the glomeruli of canine renal allografts. Proc. Electron Microscopy Soc. Amer., pp. 60-61.
- Lemanski, L.F., E.M. Bertke and J.T. Justus 1970 The ultrastructure of myocardial cells in normal and cardiac lethal mutant Mexican axolotls, Ambystoma mexicanum. Proc. Electron Microscopy Soc. Amer., pp. 62-63.
- Lemanski, L.F. 1972 Z-bands in developing heart muscle of the Mexican salamander, Ambystoma mexicanum. Proc. Electron Microscopy Soc. Amer., pp. 24-25.
- Keyhani, E., L.F. Lemanski and S.L. Lemanski 1973 Arrangement of mitochondria in spermatozoa of the Mexican axolotl, Ambystoma mexicanum. Proc. Electron Microscopy Soc. Amer., 31: 626-627.
- Lemanski, L.F. 1975 Heavy meromyosin binding studies of myocardial cells in cardiac lethal mutant salamanders, Ambystoma mexicanum. Proc. Electron Microscopy Soc. Amer., 33: 540-541.
- Keyhani, E. and L.F. Lemanski 1975 Fine structure of micromitochondria in spermatozoa of the Mexican axolotl, Ambystoma mexicanum. Proc. Electron Microscopy Soc. Amer., 33: 592-593.
- Lemanski, L.F. and B.S. Marx 1975 Morphological observations on anterior endoderm in cardiac mutant Mexican salamanders (Ambystoma mexicanum). Proc. Electron Microscopy Soc. Amer., 33: 484-485.
- Lemanski, L.F. 1975 Morphology of anterior endoderm in cardiac lethal mutant axolotls, Ambystoma mexicanum. Proc. Electron Microscopy Soc. Amer., 33: 484-485.
- Lemanski, L.F. 1981 Myofibrillogenesis and heart induction in cardiac mutant axolotls. Proc. Electron Microscopy Soc. Amer., 39: 476-479.
- Greaser, M.L., S.M. Wang and L.F. Lemanski 1982 New myofibrillar proteins. Recip. Meat Conf. Proceed., 34: 12-16.
- Zhang, C., G.F. Sferrazza, P. Jia, S.L. Lemanski and L.F. Lemanski 2005 Characterization of a unique RNA that regulates cardiac myofibrillogenesis. Proceedings of the International Society for Heart Research, 25th European Section Meeting, Tromso, Norway, pp 75-78.

Invited Research Review Book Chapters

- Lemanski, L.F. 1974 Studies of developing myocardial cells in cardiac lethal mutant Mexican axolotls (Ambystoma mexicanum). In: Exploratory Concepts in Muscular Dystrophy II (Ed., A. Milhorat), Excerpta Medica, Amsterdam, pp. 292-307.
- Somlyo, A.V., F. Ashton, L. Lemanski, J. Vallieres and A.P. Somlyo 1977 Filament organization and dense bodies in vertebrate smooth muscle. In: The Biochemistry of Smooth Muscle (Ed., N. Stephans), University Park Press, Baltimore, pp. 445-471.
- Lemanski, L.F. 1977 Morphological and biochemical abnormalities in hearts of cardiac mutant salamanders (Ambystoma mexicanum). In: Proceedings of the ICN-UCLA Symposium on Cell Shape and Surface Architecture (Eds., J.R. Revel, W. Henning, C.F. Fox), 17: 173-190, Alan R. Liss, Inc., New York.
- Lemanski, L.F. 1978 Myogenesis and inductive processes during heart development in Mexican axolotls (Ambystoma mexicanum). In: Morphogenesis and Malformation of the Cardiovascular System (Eds., G.C. Rosenquist and D. Bergsma), Birth Defects: Original Article Series, Alan R. Liss, Inc., New York, 14: 179-203.
- Messina, D.A., Y. Isobe, M. Delmar and L.F. Lemanski 1988 Visualization of membrane and cytoskeletal proteins in permeabilized isolated adult cardiac myocytes by immunohistochemical and

- morphological methods. In: *Biology of Isolated Cardiac Myocytes* (Eds. W.A. Clark, R.S. Decker and T.K. Borg), Elsevier Scientific Publishers, New York, pp. 310-313.
- Isobe, Y., D.A. Messina and L.F. Lemanski 1989 Spacial immunolocalization of cytoskeletal proteins during cardiac myogenesis *in vitro*. In: *Cellular and Molecular Biology of Muscle Development, UCLA Symposium on Molecular and Cellular Biol. N.S. 93* (Eds., Stockdale, F. and Kedes, L.), Alan R. Liss, New York, pp. 259-270.
- Isobe, Y., G.R. Hou, D.A. Messina and L.F. Lemanski 1989 Three-dimensional localization of contractile proteins in cultured cardiac myocytes by immunogold staining and deep-etching replica electron microscopy. In: *Cell and Tissues: A Three-dimensional Approach by Modern Techniques in Microscopy*. (Ed., P.M. Motta), Alan R. Liss, New York, pp. 295-300.
- Fransen, M.E. and L.F. Lemanski 1989 Studies of heart development in normal and cardiac lethal mutant axolotls: a review. *Scan. Microsc.*, 3: 1101-1116.
- Lemanski, L.F., X. Huang, R. W. Zajdel, S.L. Lemanski, C. Zhang, F. Meng, D. Foster, Q. Li and D.K. Dube 2002 Cellular, molecular and developmental studies on heart development in normal and cardiac mutant axolotls, *Ambystoma mexicanum*. In: *Myofibrillogenesis* (Ed. D.K. Dube, Springer Verlag) pp. 207-222.
- Zajdel, R.W., M.D. McLean, L.F. Lemanski and D.K. Dube 2002 Manipulation of myofibrillogenesis in whole embryonic hearts. In: *Myofibrillogenesis* (Ed. D.K. Dube, Springer Verlag) pp. 87-100.
- Lemanski, L.F., C. Zhang, A. Kochegarov, A. Moses, W. Lian, J. Meyer, P. Jia, Y. Jia, K.A. Webster, X. Huang, M. Hanna, M.P. Achary, S.L. Lemanski, and H. Weissbach 2012 Protection of mouse embryonic stem cells from oxidative stress by methionine sulfoxide reductases. In: *Oxidative Stress: Molecular Mechanisms and Biological Effects* (Eds. V.I. Lushchak and H.M. Semchyshyn, InTech, Rijeka, Croatia) pp. 197-230.

National/International Professional Paper Presentations

- Lemanski, L.F. and J.T. Justus 1970 The histology and ultrastructure of developing heart muscle in cardiac lethal mutant Mexican axolotls, *Ambystoma mexicanum*. Southwest and Rocky Mtn. Div., AAAS, Las Vegas, MN.
- Lemanski, L.F. 1971 Myofibrillogenesis in developing heart muscle of the Mexican axolotl, *Ambystoma mexicanum*. *Amer. Zool.*, 11: 678-679a.
- Lemanski, L.F. 1972 Fine structure of developing heart in cardiac lethal mutant axolotls, *Ambystoma mexicanum*. *J Cell Biol.*, 55: 151a.
- Lemanski, L.F. and R. Aldoroty 1974 Role of acid phosphatase in amphibian yolk platelet degradation during early embryogenesis. *J. Cell Biol.*, 63: 109a.
- Lemanski, L.F. and M.R. Iyengar 1974 Muscle proteins in developing myocardial cells of cardiac mutant axolotls. *Fed. Proc.*, 33: 1521a.
- Joseph, X., L.F. Lemanski and M.R. Iyengar 1975 Filament formation of smooth muscle myosin. *Biophys. J.*, 15: 127a.
- Lemanski, L.F., X. Joseph and M.R. Iyengar 1975 Quantitation of myosin by radioimmunoassay in developing myocardial cells of cardiac lethal mutant Mexican axolotls, *Ambystoma mexicanum*. *Amer. Soc. Cell Biol.*, P. Rico, 67: 249a.
- Lemanski, L.F. 1976 Morphological and biochemical abnormalities in hearts of cardiac mutant axolotls. Presented at the ICN-UCLA Winter Conference on Molecular and Cellular Biology, Squaw Valley (March 7-12, 1976).
- Lemanski, L.F., J. Hahn, C. Hill and R. Fuldner 1976 Role of tropomyosin in actin filament formation in differentiating salamander heart cells. *J. Cell Biol.*, 70: 152a.
- Hill, C.S. and L.F. Lemanski 1977 Morphological studies on cardiac lethal mutant salamander hearts in organ cultures. *J. Cell Biol.*, 75: 49a.

- Lemanski, L.F. and R.A. Fuldner 1977 Immunofluorescent studies for myosin, tropomyosin and alpha-actinin in developing hearts of normal and cardiac lethal mutant salamanders. *J. Cell Biol.*, 75: 327a.
- Kidd, P., L.F. Lemanski and A.L. Jones 1977 Cardiomyopathic hamsters: accelerated myofibrillogenesis during heart development. *J. Cell Biol.*, 75: 326a
- Raskin, S., L.F. Lemanski, J. Abouav and H. Paley 1978 Induction of sarcomerogenesis by synchronous bifocal ventricular pacing. Amer. Col. Cardiol. 27th Annual Meeting, Anaheim, CA.
- Lemanski, L.F., D. Paulson and C. Hill 1978 Normal anterior endoderm corrects the heart defect in cardiac lethal mutant salamanders. Amer. Soc. Cell Biol., 18th Annual Meeting, San Antonio, TX.
- Woodroffe, M.N. and L.F. Lemanski 1979 Actin isozymes in developing heart of the axolotl. *J. Cell Biol.*, 83: 325a.
- Moore, P.B. and L.F. Lemanski 1979 A radioimmunoassay for tropomyosin in muscle tissue homogenates. *J. Cell Biol.*, 83: 305a.
- Lemanski, L.F., D.J. Paulson and S. Lim-Spiker 1980 Immunoferritin method for the ultrastructural localization of alpha-actinin in methacrylate-embedded thin-sectioned tissues. *J. Cell Biol.*, 87: 232a.
- Moore, P.B. and L.F. Lemanski 1980 Quantitation of tropomyosin by radioimmunoassay in developing hearts of cardiac mutant axolotls. *J. Cell Biol.*, 87: 265a.
- Woodroffe, M.N. and L.F. Lemanski 1980 Actin in cardiac mutant and normal axolotl hearts. *J. Cell Biol.*, 87: 266a.
- Woodroffe, M.N., S. Lim-Spiker and L.F. Lemanski 1980 Chick heart development analyzed by two-dimensional gel electrophoresis and electron microscopy. *J. Cell Biol.*, 87: 266a.
- Paulson, D.J., M.E. Tripp, L.F. Lemanski and A.L. Shug 1981 L-Carnitine deficiency in the Syrian hamster and rat. *Fed. Proc.*
- Tu, Z.H., S.M. Wang and L.F. Lemanski 1981 Scanning and transmission electron microscopy of dissociated cardiomyopathic hamster heart cells. *J. Cell Biol.*, 91: 349a.
- Tu, Z.H., S.M. Wang and L.F. Lemanski 1981 Cardiomyopathic hamster heart cells in culture. *J. Cell Biol.*, 91: 356a.
- Lim-Spiker, S., M.N. Woodroffe and L.F. Lemanski 1981 Analysis of muscle proteins in developing chick heart. *J. Cell Biol.*, 91: 349a.
- Hill, C.S., D.J. Paulson and L.F. Lemanski 1982 Immunohistochemical localization of alpha-actinin in developing hamster cardiomyocytes. *Anat. Rec.*, 202: 82a.
- Lemanski, L.F., D.J. Paulson, C.S. Hill, S. Lim-Spiker, and G. Nizzamuddin 1982 Immunoelectron microscopy of contractile proteins. Seventh International Conf. on Immunofluorescence, Immunoenzyme Studies and Related Labeling Techniques, Niagara Falls.
- Hill, C.S. and L.F. Lemanski 1982 Alpha-actinin localization in developing hamster heart myocytes. Seventh International Conf. on Immunofluorescence, Immunoenzyme Studies and Related Labeling Techniques, Niagara Falls.
- Tu, Z.H. and L.F. Lemanski 1982 Immunofluorescent studies for actin, myosin, tropomyosin and alpha-actinin in cultured cardiomyopathic hamster heart cells. Seventh International Conference on Immunofluorescence, Immunoenzyme Studies and Related Labeling Techniques, Niagara Falls.
- Lemanski, L.F., D.J. Paulson, C.S. Hill, S. Lim-Spiker and G. Nizzamuddin 1982 Immunoelectron microscopic method for the localization of contractile proteins. *J. Cell Biol.*, 95: 377a.
- Hill, C.S. and L.F. Lemanski 1982 Immunoelectron microscopic localization of contractile proteins in developing hamster heart cells. *J. Cell Biol.*, 95: 373a.
- Fuldner, R.A., S. Lim-Spiker and L.F. Lemanski 1982 Immunofluorescent studies for troponin-T in developing hearts of normal and cardiac mutant axolotl embryos. *J. Cell Biol.*, 95: 374a.

- Lim-Spiker, S., Z.H. Tu and L.F. Lemanski 1982 Troponin-T monoclonal antibodies reveal a common determinant in skeletal, cardiac and smooth muscle which is also present in non-muscle cells. *J. Cell Biol.*, 95: 373a.
- Davis, L.A. and L.F. Lemanski 1983 Inductive properties of a factor produced by endoderm. *J. Cell Biol.*, 97: 58a.
- Wang, S.M., S.S. Lim, L.F. Lemanski and M.L. Greaser 1983 Immunocytochemical localization of titin using a monoclonal antibody against bovine cardiac titin. *J. Cell Biol.*, 97: 258a.
- Tu, Z.H. and L.F. Lemanski 1984 Morphological and immunohistochemical studies on heart in cardiomyopathic hamsters. *Proc. First Int. Sym. Contractile Proteins, Sassari, Italy.*
- Lemanski, L.F., L.A. Davis, C.S. Hill and D.J. Paulson 1984 Studies on heart development and inductive processes in cardiac mutant axolotls, *Ambystoma mexicanum*. *Proc. First Int. Sym. Contractile Proteins, Sassari, Italy.*
- Lemanski, L.F., D.J. Paulson, C.S. Hill and S. Lim 1984 Immunoelectron microscopic localization of alpha-actinin on lowicryl-embedded thin sectioned muscle and nonmuscle cells. *Third International Congress on Cell Biology (Tokyo, Japan).*
- Davis, L.A. and L.F. Lemanski 1984 Induction of myofibrillogenesis in hearts of cardiac mutant axolotl embryos by anterior endoderm RNA. *J. Cell Biol.*, 99: 438a.
- Osinska, H. and L.F. Lemanski 1985 Analysis of proteins in normal and cardiomyopathic hamster hearts. *J. Cell Biol.*, 101: 439a.
- Starr, C.M., J.G. Diaz and L.F. Lemanski 1985 Analysis of actin and tropomyosin in cardiac mutant axolotls by two-dimensional gel electrophoresis, western blots and immunofluorescent microscopy. *J. Cell Biol.*, 101: 42a.
- Davis, L.A. and L.F. Lemanski 1985 Differentiation of mutant cardiac muscle induced by RNA from embryonic and adult tissues. *J. Cell Biol.*, 101: 39a.
- Fransen, M.E. and L.F. Lemanski 1986 Extracellular matrix of the developing heart in normal and cardiac lethal mutant axolotls, *Ambystoma Mexicanum*. *J. Cell Biol.*, 103: 528a.
- Isobe, Y. and L.F. Lemanski 1986 A method for the three-dimensional localization of contractile proteins in cultured cardiomyocytes by immunogold electron microscopy. *Anat. Rec.*, 214: 59a.
- Isobe, Y. and L.F. Lemanski 1986 Cytoskeletal architecture and subcellular localization of contractile proteins in cultured cardiomyocytes by platinum replica immunoelectron microscopy. *Acta Biologica Hungarica*, 37: 195a.
- Isobe, Y. and L.F. Lemanski 1986 Localization of alpha-actinin in the cytoskeleton of cultured cardiomyocytes of platinum replica immunogold electron microscopy. *J. Cell Biol.*, 103: 126a.
- Messina, D.A. and L.F. Lemanski 1986 Immunofluorescent staining for spectrin in developing hamster cardiac myocytes. *J. Cell Biol.*, 103: 541a.
- Osinska, H.E. and L.F. Lemanski 1986 Distribution of desmin in developing hamster skeletal muscle cells. *J. Cell Biol.*, 103: 416a.
- Osinska, H.E. and L.F. Lemanski 1986 Immunofluorescent localization of desmin and vimentin in developing cardiac muscle of Syrian hamster. *J. Cell Biol.*, 103: 416a.
- Shen, P.S., J.G. Diaz and L.F. Lemanski 1986 Immunofluorescent studies for desmin, vimentin and vinculin in developing hearts of normal and cardiac mutant Mexican axolotls, *Ambystoma Mexicanum*. *J. Cell Biol.*, 103: 123a.
- Isobe, Y. and L.F. Lemanski 1987 Three-dimensional localization of alpha-actinin in cultured cardiac muscle and nonmuscle cells by whole mount and freeze-etching replica methods. *38th Histochemical Society (New Orleans, LA).*
- Osinska, H.E. and L.F. Lemanski 1987 Localization of desmin and alpha-actinin in differentiation hamster cardiomyocytes in culture. *J. Cell Biol.*, 105: 286a.

- Shen, P.S. and L.F. Lemanski 1987 Immunohistochemical studies for desmin in developing hearts of normal and cardiac mutant Mexican axolotls, Ambystoma mexicanum. J. Cell Biol., 105: 209a.
- Isobe, Y., D.A. Messina and L.F. Lemanski 1987 Immunogold localization of cytoskeletal proteins in cultured cardiac muscle and nonmuscle cells of light and three-dimensional electron microscopy. J. Cell Biol., 105: 28a.
- Messina, D.A. and L.F. Lemanski 1987 Immunocytochemical localization of three types of spectrin in hamster cardiac tissue. J. Cell Biol., 105: 290a.
- Messina, D.A., Y. Isobe, M. Delmar and L.F. Lemanski 1987 Visualization of membranes and cytoskeletal proteins in permeabilized isolated adult cardiac myocytes by immunohistochemical and morphological methods. Conference on the Biology of Isolated Adult Cardiac Myocytes, Asilomar, California, September, 1987.
- Isobe, Y., D.A. Messina and L.F. Lemanski 1988 Subcellular distribution of spectrin and alpha-actinin in cultured hamster heart cells. 4th International Congress of Cell Biology, Montreal, Canada, August, 1988. p. 2.5.2: 118.
- Li, J. and L.F. Lemanski 1988 Immunofluorescent studies for tubulin, actin, and alpha-actinin in cultured cardiac myocytes. 4th International Congress of Cell Biology, Montreal, Canada, August, 1988. p. 2.5.3: 118.
- Isobe, Y., D.A. Messina and L.F. Lemanski 1988 Three-dimensional localization of contractile proteins in cultured cardiac myocytes by immunogold staining and deep-etching replica electron microscopy. VIII International Symposium on Morphological Sciences, Rome, Italy. July, 1988. p.191.
- Messina, D.A., Y. Isobe and L.F. Lemanski 1988 Cytoskeletal and membrane protein relationships in the developing heart: A focus on spectrin. VIII International Symposium on Morphological Sciences, Rome, Italy. July, 1988. p. 263.
- Fransen, M.E. and L.F. Lemanski 1989 Fibronectin and laminin in the developing heart of the axolotl, Ambystoma mexicanum. J. Cell Biol., 107: 600a.
- Li, J. and L.F. Lemanski 1989 Immunofluorescent studies for alpha-actinin in cultured cardiomyopathic hamster heart cells. J. Cell Biol., 107: 473a.
- Osinska, H.E., M. Moussavian and L.F. Lemanski 1989 A difference in the cell adhesion kinetics of cultured heart cells from normal and cardiomyopathic hamsters. J. Cell Biol., 107: 382a.
- Isobe, Y., G.R. Hou and L.F. Lemanski 1989 Three-dimensional distributions of desmin and vimentin in cultured hamster cardiomyocytes using the immunogold deep-etching replica technique. J. Cell Biol., 107: 473a.
- Luque, E.A., R.D. Veenstra and L.F. Lemanski 1989 Localization of gap junctions in fresh frozen normal and cardiomyopathic adult hamster heart. J. Cell Biol., 109: 47a.
- LaFrance, S.M., H. Zou, B. Dunham and L.F. Lemanski 1989 Induction of myofibrillogenesis in cardiac mutant axolotls. J. Cell Biol., 109: 167a.
- Li, J. and L.F. Lemanski 1989 Analysis of the general morphological and cytoskeletal proteins in cultured cardiomyopathic hamster heart cells. J. Cell Biol., 109: 170a.
- Campbell, S.J., M.E. Fransen, D.A. Messina and L.F. Lemanski 1989 Localization of spectrin and ankyrin in the ventricle of Ambystoma mexicanum. J. Cell Biol., 109: 170a.
- Messina, D.A. and L.F. Lemanski 1989 Studies of hamster cardiac myofibrillogenesis in vivo using antibodies to spectrin, desmin and alpha-actinin. J. Cell Biol., 190: 262a.
- Ray, T.K., J. Gordon and L.F. Lemanski 1989 Redistribution of cytosolic activator following secretagogue-stimulation of gastric H⁺ transport. Fed. Amer. Soc. Exp. Biol.
- Messina, D.A., Y. Isobe, G.R. Hou and L.F. Lemanski 1989 Spectrin immunolocalization in the mammalian heart. J. Cell Biochem., Supplement 13E: 120.

- Hou, G.R., Y. Isobe and L.F. Lemanski 1989 An analysis of the distribution of desmin during cardiac myofibrillogenesis *in vitro* in normal and cardiomyopathic hamster using double-label immunofluorescent microscopy. *J. Cell Biochem.*, Supplement 13E: 504.
- Isobe, Y., G.R. Hou and L.F. Lemanski 1989 Three-dimensional organization of intermediate and actin filaments during cardiac myofibrillogenesis *in vitro* revealed by immunogold replica electron microscopy. *J. Cell Biochem.*, Supplement 13E: 505.
- Hou, G.R. and L.F. Lemanski 1990 Deep-etching replica immunogold electron microscopy study of desmin during cardiac myofibrillogenesis in cultured normal and cardiomyopathic hamster heart cells. *J. Cell Biochem.*, Supplement 14a.
- Li, J. and L.F. Lemanski 1989 Abnormalities in myofibril organization and cell shape in developing cardiomyopathic hamster heart cells in culture. Congress of Embryonic Origins of Defective Heart Development. The New York Academy of Sciences. Arlington, May, 1989.
- Fransen, M.E., S.M. LaFrance and L.F. Lemanski 1990 Correction of aberrant myofibrillogenesis in cardiac mutant axolotls. *J. Cell Biol.*, 111(5): 38a.
- Li, J. and L.F. Lemanski 1990 Abnormalities in the intermediate filament protein, desmin, in cardiomyopathic hamster heart. *J. Cell Biol.*, 111(5): 175a.
- Ray, T.K. and L.F. Lemanski 1990 Regulation of cardiac sarcolemmal Na⁺K⁺-ATPase in cardiomyopathic hamsters by cytosolic activator and calcium. *J. Cell Biol.*, 111(5): 311a.
- Erginel, N.U. and L.F. Lemanski 1990 Immunofluorescent studies for titin in embryonic hearts of normal and cardiac mutant axolotls. *J. Cell Biol.*, 111(5): 426a.
- Lemanski, L.F., Y. Isobe, G.R. Hou, M. Nakatsugawa, J. Li, M.E. Fransen, K.G. Salsbury, C.F. Carter and S.L. Lemanski 1990 Three-dimensional architecture of contractile/ cytoskeletal proteins in hamster heart cells by immunogold deep-etch replica studies. *J. Cell Biol.*, 111(5): 427a.
- Lemanski, L.F., M.E. Fransen and S.M. LaFrance 1991 Rescue of aberrant myofibrillogenesis in cultured hearts of cardiac mutant salamanders by exogenous RNA. *J. Cell Biochem.*, Suppl. 15c.
- Li, J. and L.F. Lemanski 1991 Desmin phosphorylation in hearts of cardiomyopathic hamster. *J. Cell Biol.*, 115: 178a.
- Makhuli, C.N. and L.F. Lemanski 1991 Spectrin immunofluorescent and gel electrophoresis studies in normal and dystrophic UM-X7.1 hamster. *J. Cell Biol.*, 115: 178a.
- Erginel, N.U. and L.F. Lemanski 1991 Immunofluorescent studies for titin in embryonic hearts of normal and cardiac mutant axolotls. *J. Cell Biol.*, 115: 355a.
- Ward, S. and L.F. Lemanski 1991 Immunofluorescent staining for titin in hearts of cardiomyopathic and normal Syrian hamsters. *J. Cell Biol.*, 115: 380a .
- LaFrance, S., M.E. Fransen, N. Erginel-Unaltuna, D.K. Dube, T. Ray and L. Lemanski 1991 A specific RNA, secreted by the endoderm, corrects aberrant myofibrillogenesis in developing axolotl mutant hearts. American Society for Cell Biology Special Session.
- Erginel-Unaltuna, N., D.K. Dube, S. LaFrance, M. Fransen, T. Ray and L. Lemanski 1992 Characterizations of cDNAs prepared from RNA present in conditioned medium capable of inducing heart differentiation in axolotls. Conf. on Molecular Biology Arlie, Virginia. May 13 - 16, 1992.
- LaFrance, S., M.E. Fransen, D.K. Dube, N. Erginel-Unaltuna, T. Ray and L. Lemanski 1992 A possible role for RNA in cardiomyocyte differentiation. Fifth International Congress on Cell Biology, Madrid, Spain. July 26 - 31, 1992.
- LaFrance, S., N. Erginel-Unaltuna, M. Fransen, D.K. Dube, T. Ray and L. Lemanski 1992 RNA promotes terminal differentiation in cardiac mutant axolotl hearts. *Molec. Biol. Cell*, 3: 108a.
- Osinska, H. and L. Lemanski 1992 Maturation of myofibrils in normal and cardiomyopathic hamster cardiomyocytes *in vitro*. *Molec. Biol. Cell*, 3: 255a.

- Erginel-Unaltuna, N., D.K. Dube, S.M. LaFrance and L.F. Lemanski 1992 Characterization of the conditioned medium which induces beating in hearts of cardiac nonfunction mutant axolotls. *Molec. Biol. Cell*, 3: 108a.
- Erginel-Unaltuna, N., D.K. Dube and L.F. Lemanski 1993 Immunohistochemical studies of a unique protein from axolotl. *Molec. Biol. Cell*, 4: 143a.
- LaFrance, S., D.K. Dube, M. Nakatsugawa, N. Erginel-Unaltuna, R. Capone, S.F. Lemanski and L.F. Lemanski 1993 Partial characterization of an RNA which promotes myofibrillogenesis in cardiac mutant axolotl hearts. *Molec. Biol. Cell*, 4: 143a.
- Luque, E., D.K. Dube and L.F. Lemanski 1993 Molecular analysis of tropomyosin in the axolotl, *Ambystoma mexicanum*. *Molec. Biol. Cell*, 4: 44a.
- Mangiacapra, F., M.E. Fransen and L.F. Lemanski 1993 Activin A and transforming growth factor- β stimulate heart formation in axolotls but do not rescue cardiac lethal mutants. *Molec. Biol. Cell*, 4: 143a.
- Szostak, M., S. LaFrance and L.F. Lemanski 1993 Dystrophin localization in normal and cardiac lethal mutant axolotl hearts. *Molec. Biol. Cell*, 4: 144a.
- Ward, S., D.K. Dube, M.E. Fransen and L.F. Lemanski 1993 Developmental analysis of isoforms of myosin binding protein-c (c-protein) in striated muscle of the axolotl, *Ambystoma mexicanum*. *Molec. Biol. Cell*, 4: 261a.
- Lemanski, L.F., S. LaFrance, D.K. Dube, M. Nakatsugawa, N. Erginel-Unaltuna, M.E. Fransen, R. Capone and S.F. Lemanski 1993 Studies on an RNA which promotes myofibril formation in mutant axolotl hearts. (Presentation at International Workshop on Molecular Biology of Urodeles, Indianapolis, IN).
- Zhu, Y.Z. and L.F. Lemanski 1994 Confocal laser microscopy of desmin and vimentin in developing cardiomyocytes of normal and cardiac mutant axolotls, *Ambystoma mexicanum*. *Molec. Biol. Cell*, 5: 299a.
- Erginel-Unaltuna, N., D.K. Dube and L.F. Lemanski 1994 Protein synthesis during heart development in normal and cardiac mutant axolotls. *Molec. Biol. Cell*, 5: 28a.
- Erginel-Unaltuna, N., D.K. Dube and L.F. Lemanski 1994 Biochemical and immunohistochemical studies on a novel protein. *Molec. Biol. Cell*, 5: 348a.
- LaFrance, S.M. and L.F. Lemanski 1994 Immunofluorescent confocal analysis of tropomyosin in developing hearts of normal and cardiac mutant axolotls, *Ambystoma mexicanum*. *Molec. Biol. Cell*, 5: 27a.
- Ward, S., D.K. Dube, M.E. Fransen and L.F. Lemanski 1994 Developmental and molecular characterization of a myosin binding protein-c (cardiac isoform) in the mexican axolotl (*Ambystoma mexicanum*). *Molec. Biol. Cell*, 5: 162a.
- Luque, E.A., L.F. Lemanski and D.K. Dube 1994 Molecular cloning, sequencing and expression of an isoform of cardiac alpha-tropomyosin from the Mexican axolotl (*Ambystoma mexicanum*). *Molec. Biol. Cell*, 5: 208a.
- Gaur, A., D.K. Dube, M.E. Fransen and L.F. Lemanski 1994 Cloning, sequencing and expression of hox 1.3 homologue in the mexican axolotl, *Ambystoma mexicanum*. *Molec. Biol. Cell*, 5: 455a.
- Zajdel, R. and L.F. Lemanski 1994 Localization and quantitation of myofibrillar proteins by confocal microscopy in developing hearts of normal and cardiac mutant mexican axolotls. *Molec. Biol. Cell*, 5: 28a.
- Gaur, A., M.E. Fransen, D.K. Dube and L.F. Lemanski 1995 Expression of two homeobox genes in developing normal and mutant axolotl hearts. *Molec. Biol. Cell*, 6: 304a.
- Spinner, B.J., E. Luque, D.K. Dube and L.F. Lemanski 1995 Tropomyosin diversity in the mexican axolotl. *Molec. Biol. Cell*, 6: 418a.

- Pietras, K.M., D.K. Dube and L.F. Lemanski 1995 Immunohistochemical analysis of troponin T in the mexican axolotl (Ambystoma mexicanum). Molec. Biol. Cell, 6: 250a.
- Zajdel, R., Y.Z. Zhu, M.E. Fransen and L.F. Lemanski 1995 Primary cell culture and morphological characterization of mutant cardiomyocytes from embryonic mexican axolotl. Molec. Biol. Cell, 6: 151a.
- Zajdel, R., R. Bhatia-Gaur, Y.Z. Zhu, D.K. Dube and L.F. Lemanski 1995 RNA increases contractions and myofibril formation in primary cell cultures of cardiac mutant axolotl myocytes. Molec. Biol. Cell, 6: 152a.
- Zhu, Y.Z., R. Zajdel and L.F. Lemanski 1995 Intermediate filament proteins in cultured cardiac myocytes of embryonic normal and cardiac mutant mexican axolotl. Molec. Biol. Cell, 6: 377a.
- Lemanski, L.F., M. Nakatsugawa, R. Bhatia and D.K. Dube 1995 Promotion of myofibrillogenesis in cardiac mutant axolotl heart by synthetic RNA. Molec. Biol. Cell, 6: 250a.
- Lemanski, L.F., M. Nakatsugawa, R. Bhatia and D.K. Dube 1996 A specific synthetic RNA promotes cardiac myofibrillogenesis in the Mexican axolotl. Molec. Biol. Cell, 7: 626a.
- Mangiacapra, F.J., B.J. Spinner, M.E. Fransen, D.K. Dube and L.F. Lemanski 1996 Expression of activin during heart development using reverse transcriptase-polymerase chain reaction. Molec. Biol. Cell, 7: 311a.
- Spinner, B.J., E.A. Luque, D.K. Dube and L.F. Lemanski 1996 Analysis of cardiac tropomyosin expression in the Mexican axolotl. Molec. Biol. Cell, 7: 536a.
- Bhatia, R., L.F. Lemanski and D.K. Dube 1996 Expression pattern of a novel developmentally regulated RNA-binding protein from the Mexican axolotl. Molec. Biol. Cell, 7: 295a.
- Pietras, K.M., D.K. Dube and L.F. Lemanski 1996 Cardiac troponin-T expression in the developing Mexican axolotl. Molec. Biol. Cell, 7: 537a.
- Gaur, A., L.F. Lemanski and D.K. Dube 1996 Identification and expression of a novel homeobox gene AxNox in the Mexican axolotl, Ambystoma mexicanum. Molec. Biol. Cell, 7: 625a.
- Lemanski, L.F., R. Zajdel, R. Bhatia, M. Nakatsugawa and D. Dube 1997 An RNA induces myofibrillogenesis in hearts of cardiac mutant axolotls. FASEB J.
- Spinner, B.J., D.K. Dube and L.F. Lemanski 1997 Tissue specific expression of a novel alpha-tropomyosin isoform in the Mexican axolotl. Molec. Biol. Cell, 8: 314a.
- Spinner, B.J., D.K. Dube and L.F. Lemanski 1997 Expression studies of a cardiac TM-4 type tropomyosin. Molec. Biol. Cell, 8: 314a.
- Zajdel, R.W., M.D. McLean, D.K. Dube and L.F. Lemanski 1997 Ectopic expression of tropomyosin in cardiac mutant axolotl hearts promotes organized myofibril formation. Molec. Biol. Cell, 8: 373a.
- McLean, M.D., R. Bhatia, D.K. Dube and L.F. Lemanski 1997 Molecular biology of the cell mutational analysis of synthetic clone #4 RNA that promotes cardiac myofibrillogenesis in axolotls. Molec. Biol. Cell, 8: 213a.
- Dube, D.K., R. Bhatia, M. McLean, S.L. Lemanski and L.F. Lemanski 1998 Interaction of myofibril-promoting clone #4 RNA with a cardiac protein in the Mexican axolotl, Ambystoma mexicanum. Molec. Biol. Cell, 9: 148a.
- Dube, D.K., R.W. Zajdel, B.J. Spinner, M.D. McLean, S. Dube and L.F. Lemanski 1998 Expression of a novel isoform of tropomyosin in striated muscles of normal and cardiac mutant Mexican axolotls. Molec. Biol. Cell, 9: 149a.
- Lemanski, L.F., M. Nakatsugawa, S.L. Lemanski, R. Zajdel, K. Salsbury, M. McLean and D.K. Dube 1998 Chimeric axolotls produce embryos with 100% cardiac mutant phenotype. Molec. Biol. Cell, 9: 149a.
- Lemanski, L.F., R. Bhatia, R. Zajdel, M. McLean, M. Nakatsugawa, S. Lemanski and D.K. Dube 1998 A synthetic RNA induces cardiac myofibrillogenesis in the Mexican axolotl, Ambystoma mexicanum. Molec. Biol. Cell, 9: 148a.

- Foster, D.A., J. Leach, F.Y. Meng, S.L. Lemanski and L.F. Lemanski 1999 Isolation of intracellular protein ligands of a bioactive RNA (CL-4) which promotes myofibrillogenesis in mutant *Ambystoma mexicanum* axolotl hearts. *FASEB J.*, 13 (4): 441a.
- Meng, F.Y., N. Dawson, S.L. Lemanski, D. Foster, X.P. Huang and L.F. Lemanski 1999 Immunofluorescent analysis of protein tyrosine phosphorylation during cardiac myofibrillogenesis in the Mexican axolotl, *Ambystoma mexicanum*.. *FASEB J.*, 13 (4): 441a.
- Meng, F.Y., D. Foster, C. Tong, S.L. Lemanski, M. Muthuchamy, X.P. Huang and L.F. Lemanski 1999 Reduced expression of a novel protein associated with heart development in embryos of cardiac mutant axolotls, *Ambystoma mexicanum*.. *FASEB J.*, 13 (4); 441a
- Huang, X.P., K.J. Lee, P.A. Bowers, J.W. Walker and L.F. Lemanski 1999 Developmental regulation of troponin I in mouse heart. (Weinstein Cardiovascular Development Conference, Tucson, Arizona).
- Lemanski, L.F., X. Huang, R. Bhatia, R. Zajdel, F. Meng, D. Foster, M. McLean, S. Lemanski and D.K. Dube 1999 Embryonic heart development in cardiac mutant axolotls, *Ambystoma mexicanum*. (Weinstein Cardiovascular Development Conference, Tucson, Arizona).
- Lemanski, L.F., F. Meng, X. Huang, S.L. Lemanski, M. Nakatsugawa, and D.K. Dube 1999 100% offspring from chimeric axolotls: a model to study early embryonic heart development in mutant Mexican axolotls. *Molec. Biol. Cell*, 10: 361a.
- Zhang, C., X. Huang, S. Lemanski, R. Bhatia, A. Gaur, F. Meng, D.K. Dube and L.F. Lemanski 1999 Molecular basis of the cardiac mutation in Mexican axolotls. *Molec. Biol. Cell*, 10: 361a.
- Zajdel, R.W., M.D. McLean, L.F. Lemanski, S. Dube, B. Spinner and D.K. Dube 1999 Transfection of tropomyosin isoform-specific oligonucleotide disrupts structure and function in whole embryonic hearts. *Molec. Biol. Cell*, 10: 169a.
- Zajdel, R.W., M.D. McLean, L.F. Lemanski, G. Isitmangil, D.F. Wieczorek and D.K. Dube 1999 Asp175Asn mutant tropomyosin alters myofibril formation in embryonic whole hearts. *Molec. Biol. Cell*, 10: 169a.
- Meng, F., X. Huang, N. Erginel-Unaltuna, S. Lemanski, C. Tong, C. Zhang, M. Muthuchamy, D. Dube and L. Lemanski 2000 Analysis of N1 protein gene expression during early embryonic development in cardiac mutant axolotls. *FASEB J.* 14: 276a.
- Meng, F., R. Zajdel, X. Huang, S. Lemanski, C. Zhang, N. Erginel-Unaltuna, D. Dube and L. Lemanski 2000 Down-regulation of N1 gene expression with antisense oligonucleotides inhibits the heartbeat in axolotls. *FASEB J.* 14: 276a.
- Meng, F., X. Huang, R. Zadjel, S. Lemanski, C. Zhang, D. Foster, D. Dube and L.F. Lemanski 2000 Modulation of N1 protein levels by intracellular antibody transfection inhibits the initial heartbeating in Mexican axolotl. *Dev Biol. Meeting*.
- Zhang, C., X. Huang, S. Lemanski, F. Meng, D. Dube and L. Lemanski 2000 A novel synthetic RNA corrects the cardiac mutation in Mexican axolotls, *Ambystoma mexicanum*. *FASEB J.* 14: 421a.
- Lemanski, L.F. 2000 Studies on heart development in normal and cardiac mutant axolotls, *Ambystoma mexicanum*, using cellular and molecular biology. *ISHR*.
- Lemanski, L.F., C. Zhang, N. Erginel-Unaltuna, S.L. Lemanski, Q. Li, F. Meng, D. Foster, D.K. Dube and X. Huang 2000 Gene regulation of cardiac myofibrillogenesis in axolotls. *Nat'l Acad of Sci. Colloquium*, Irvine, California, 45.
- Zhang, C., D. Foster, X. Huang, S. Lemanski, F. Meng, D.K. Dube, N. Erginel-Unaltuna and L.F. Lemanski 2000 Searching for a gene which regulates cardiac myofibrillogenesis in Mexican axolotl. *Molec. Biol. Cell*, 11: 162a.
- Huang, X., K.J. Lee, B. Riedel, C. Zhang, L.F. Lemanski and J.W. Walker 2000 Thyroid hormone regulates slow skeletal troponin I gene inactivation in cardiac troponin I null mouse hearts. *Molec. Biol. Cell.*, 11: 16a.

- Dube, D.K., R.W. Zajdel, S. Dube and L.F. Lemanski 2001 Asp175Asn mutation in alpha-tropomyosin inhibits myofibrillogenesis in mutant axolotl heart. *FASEB J.*, 15: 383a.
- Lemanski, L.F., D.A. Foster, C. Zhang, S.L. Lemanski, R.W. Zajdel, N. Erginel-Unaltuna, D.K. Dube and X. Huang 2001 A novel RNA which binds to proteins promotes myofibrillogenesis in axolotl hearts. *FASEB J.*, LB86a.
- Zhang, C., D.A. Foster, X.P. Huang, S.L. Lemanski and L.F. Lemanski 2001 Role of a novel RNA in myofibrillogenesis and heart development. *Weinstein Conference*, 61a.
- Zhang, C., X. Huang, R.W. Zajdel, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2001 Gene *c* in cardiac nonfunction axolotls results in a g->t point mutation that alters a bioactive RNA essential for normal cardiac myofibrillogenesis. *Molec. Biol. Cell.*, 12: 28a.
- Zhang, C., X.P. Huang, D.A. Foster, D.K. Dube, S.L. Lemanski and L.F. Lemanski 2002 Role of a novel RNA in myofibrillogenesis and heart development. *FASEB J.*, 16: 731a.
- Dube, D.K., M.D. McLean, S. Dube and L.F. Lemanski 2002 Characterization of a TM-4 type tropomyosin which is essential for myofibrillogenesis and contractile activity in embryonic hearts of the Mexican axolotl. *FASEB J.*, 16: 1096-97a.
- Lemanski, L.F., S. LaFrance, Chi Zhang, S.L. Lemanski, X. Huang and D.K. Dube 2002 Sheep heart RNA stimulates myofibril formation and beating cardiac mutant axolotl hearts in organ culture. *FASEB J.*, LB103.
- Lemanski, L.F., C. Zhang, S. Lemanski and X. Huang 2002 A novel RNA promotes cardiac myofibrillogenesis. *J Molec. Cell. Cardiol.*, B11.
- Zhang, C., X. Huang, D.K. Dube, S.L. Lemanski and L.F. Lemanski 2002 A novel RNA which binds to proteins rescues cardiac mutant axolotl hearts. *Molec. Biol. Cell*, LB 270.
- Zhang, C., X. Huang, D.K. Dube, S.L. Lemanski and L.F. Lemanski 2003 Molecular studies on an RNA that promotes myofibrillogenesis. *AAAS*.
- Zhang, C., X. Huang, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2003 Studies on an RNA that promotes myofibrillogenesis. *FASEB J*, 17, 216.7.
- Zhang, C. X. Huang, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2003 Studies on a myofibrillogenesis-inducing RNA. *J. Molec. Cell Cardiol*.
- Zhang, C., X. Huang, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2003 Cloning of a myofibril inducing RNA (MIR) that promotes myofibrillogenesis in heart. *AHA*.
- Zhang, C., S.L. Lemanski, D.K. Dube, K.M. Pietras, G.F. Sferrazza, X. Huang and L.F. Lemanski 2003 Immunohistochemical and molecular analyses of cardiac troponin T during heart development in Mexican axolotls. *Molec. Biol. Cell.*, 14: 98a.
- Zhang, C., X. Huang, S. Dube, D.K. Dube, S.L. Lemanski and L.F. Lemanski 2003 A myofibril inducing RNA (MIR) is essential for myofibrillogenesis in early heart development. *Molec. Biol. Cell.*, 14: 256a.
- Zhang, C., X. Huang, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2004 Cloning of a myofibril inducing RNA (MIR) that promotes myofibrillogenesis. *FASEB J*.
- Zhang, C., X Huang, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2004 Myofibril inducing RNA (MIR) promotes myofibrillogenesis in mutant salamanders. *AAAS*, 113a.
- Zhang, C., R. Narayanan and L.F. Lemanski 2004 Hypoxia/reoxygenation studies on murine embryonic stem cells. *AAAS*, 112a.
- Zhang, C., X.P. Huang, S.L. Lemanski, D.K. Dube and L.F. Lemanski 2004 Myofibril inducing RNA (MIR) rescues mutant salamander heart by promoting myofibrillogenesis, *J. Molec. Cell. Cardio.*, 346a.
- Zhang, C., R. Narayanan and L.F. Lemanski 2004 Hypoxia/reoxygenation studies on mouse embryonic stem cells, *J. Molec. Cell. Cardiol.*, 346a.

- Zhang, C., X. Huang, S.L. Lemanski, S. Hussain, K.E. Halager, S. Dube, D.K. Dube and L.F. Lemanski 2005 A point-mutated RNA in axolotl embryonic hearts results in altered protein/RNA binding and failure of myofibril formation. *FASEB J.*, 19: 195.9a.
- Zhang, C., R. Narayanan and L. Lemanski 2005 Hydrogen peroxide (H₂O₂) promotes cardiac cell differentiation of mouse embryonic stem cells. *FASEB J.*, 19: 781.3a.
- Sferrazza, G.F., C. Zhang, K.M. Pietras, S.L. Lemanski, D.K. Dube, S. Dube and L.F. Lemanski 2005 Differential expression of cardiac troponin T isoforms in normal and mutant axolotl hearts. *FASEB J.*, 483.3a.
- Zhang, C. and L.F. Lemanski 2005 Role of secreted RNA from visceral endoderm-like cells in the differentiation of mouse embryonic stem cells to cardiomyocytes. International Society for Stem Cell Research.
- Zhang, C., G.F. Sferrazza, P. Jia and L.F. Lemanski 2005 Hypoxia-related studies on survivability, differentiation and migration of mouse embryonic stem cells. International Society for Stem Cell Research.
- Zhang, C., G.F. Sferrazza, P. Jia and L.F. Lemanski 2005 Myofibril-inducing RNA (MIR) promotes cardiac myofibril gene expression and is essential for embryonic heart development. Weinstein Conference.
- Zhang, C., P. Jia, S.L. Lemanski, D.K. Dube, S. Dube and L.F. Lemanski 2006 A noncoding RNA in axolotl embryonic hearts regulates tropomyosin expression posttranscriptionally. *FASEB J.*
- Maier, J.A., P. Jia, G. Athauda, C. Zhang, M. Liu, E. Rueda-de-Leon, A.K. Stassi, S.L. Lemanski, L.F. Lemanski. 2006 The discovery of RNA-binding proteins involved in cardiac myofibrillogenesis. Weinstein Cardiovascular Development Conference.
- Athauda, G., C. Zhang, J.A. Maier, E. Rueda-de-Leon, P. Jia, M. Liu, A.K. Stassi, S.L. Lemanski, L.F. Lemanski 2006 Role of secreted RNA from visceral endoderm-like cells in the differentiation of mouse embryonic stem cells to cardiomyocytes. Weinstein Cardiovascular Development Conference.
- Jia, P., C. Zhang, G. Athauda, J.A. Maier, E. Rueda-de-Leon, M. Liu, A.K. Stassi, S.L. Lemanski, and L.F. Lemanski. 2006 Posttranscriptional regulation of tropomyosin expression by myofibril inducing RNA (MIR) during embryonic heart development. Weinstein Cardiovascular Development Conference.
- Rueda-de-Leon, E., G. Athauda, C. Zhang, J.A. Maier, P. Jia, A. Stassi, S.L. Lemanski and L.F. Lemanski 2006 Conformation studies of myofibril-inducing RNA using the Mexican axolotl. Annual Biomedical Research Conference for Minority Students (ABRCMS), Anaheim, CA (Dr. Larry F. Lemanski, Sponsor).
- Rueda-de-Leon, E., G. Athauda, C. Zhang, J.A. Maier, P. Jia, A.K. Stassi, S.L. Lemanski and L.F. Lemanski 2007 Conformation studies of myofibril-inducing RNA using the Mexican axolotl. Annual Biomedical Research Conference for Minority Students/Pan American Congress in Developmental Biology.
- Kochegarov, A., A. Moses, M.C. Hanna, W. Lian and L.F. Lemanski 2011 Identification of human myofibril-inducing RNA. Amer. Soc. Cell Biol. Abstract, Denver, CO.
- Kochegarov, A., A. Moses, W. Lian, M.C. Hanna, and L.F. Lemanski 2012 Discovery of a human heart RNA that induces myocardiogenesis. Fed. Amer. Soc. Exper. Biol. J. Abstract, San Diego, CA.
- Kochegarov, A., A. Davis, L. Mitchell, M. Neal, G. Vaughn, N. Scarcelli and L.F. Lemanski 2015 Cardiac-inducing RNAs direct the differentiation of stem cells into cardiomyocytes for heart repair. Annual Research Symposium, Texas A&M University, Commerce, TX
- Neal, M., A. Kochegarov and L.F. Lemanski 2015 A cardiac inducing RNA (CIR) that has the ability to transform mouse embryonic fibroblasts into cardiac myocytes in tissue culture. Pathways Symposium, Texas A&M University, Corpus Christi, TX.

- Kocheharov, A., A. Davis, L. Mitchell, M. Neal, N. Scarcelli, G. Vaughn and L.F. Lemanski 2015 Cardiac-inducing RNAs direct the differentiation of stem cells into cardiomyocytes for heart repair. American Society for Cell Biology. Abstract, San Diego, CA.
- Neal, M., A. Kocheharov and L.F. Lemanski 2015 A cardiac-inducing RNA derived from human heart transforms mouse embryonic fibroblasts into cardiac myocytes in tissue culture. American Society for Cell Biology. Abstract, San Diego, CA.
- Lemanski, L.F. 2016 An RNA that induces non-muscle cells to differentiate into cardiac muscle. 6th Congress of the Asia-Pacific Pediatric Cardiology Society. Invited Keynote Speech. Shanghai, China.
- Lemanski, L.F., Z. Zhao, Y. Rodriguez, M.J. Equbal, M. Neal, J. Ross-Ferguson 2016 Repair of damaged heart muscle after myocardial infarction using stem cells. Royal Roar, TAMUC, Dallas, TX.
- Lemanski, L.F., A. Kocheharov, M. Neal, A. Davis, L. Mitchell, K. Shahankary, H. Fetters, N. Scarcelli and G. Vaughn 2016 Human heart RNAs induce differentiation of stem cells and fibroblasts into cardiomyocytes in culture. ISSCR Meeting Abstract, San Francisco, CA.
- Neal, M.S., A. Kocheharov, K. Shahankary, L.F. Lemanski 2017. A cardiac inducing RNA that the ability to transform mouse embryonic fibroblasts into cardiac myocytes in tissue culture. TAMUC Annual Research Symposium, Commerce, TX.
- Lemanski, L.F., M. Neal, Y. Lopez, M.J. Equbal, Z. Zhao, J. Ross-Ferguson, P. Patel, A. Davis, L. Mitchell, K. Shahankary, H. Fetters, N. Scarcelli, N. Feliciano 2017. Human heart RNAs induce differentiation of stem cells and fibroblasts into cardiomyocytes in culture. Annual Research Symposium, Texas A&M University-Commerce, TX.
- Ross-Ferguson, M. Gonzales, Z. Zhao, R. Gainshune, L.F. Lemanski. 2018 Human heart-derived RNAs that turn non-muscle cells into cardiac muscle for possible heart repair in rodents. Annual University Research Symposium, Texas A&M University-Commerce, TX.
- Zhao, Z., L. Hong, Y.L. Rodriguez, M.J. Equbal and L.F. Lemanski (2018) Repair of injured cardiac tissue using human-heart RNA in rodent myocardial infarction model. World Conference & Expo on Biomedical Engineering, Miami, Florida.
- Biswas, P., P. Biswas, J.L. Rodriguez, L. Hong, Z. Zhao and L.F. Lemanski (2018) Dose-response effect of cardiac-inducing RNA (CIR) on the differentiation of human fibroblast cells into cardiomyocytes. Texas A&M University System Pathways Symposium, West Texas University, Canyon, Texas. (Won 1st Place in Health Sciences Division).
- Biswas, P., P. Biswas, J.L. Rodriguez, L. Hong, Z. Zhao and L.F. Lemanski (2018) Optimization of dose frequency and concentrations of CIR on promotion of mouse embryonic stem cells and fibroblasts into cardiomyocytes in vitro. Texas A&M University System Pathways Symposium, West Texas University, Canyon, Texas. (Won 2nd Place in Health Sciences Division).
- Gonzalez, M., Y. Rodriguez, L. Hong, Z. Zhao and L.F. Lemanski (2018) Generation of engineered human dermal fibroblasts for screening of cardiomyocyte inducing factors. Texas A&M University System Pathways Symposium, West Texas University, Canyon, Texas.
- Rusk, J., L. Lyman-Hanley and L.F. Lemanski (2019) Evaluating the transformation process of human and mouse IPS cells treated with CIR, Texas A&M University System Pathways Symposium, TAMU-International, Laredo, TX.