October 2013

CURRICULUM VITAE

Ronald Wesley Millard

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EDUCATION

Graduate: Boston University, Medical Sciences (Physiology), Ph.D., 1969
Boston, Massachusetts, USA

Undergraduate: Tufts University, Chemistry-Biology, B.S., 1963
Medford Massachusetts, USA

Secondary: Bassick Public High School, Diploma, 1959
Bridgeport, Connecticut, USA

HONORS

National/International:
Fulbright Senior Scholar, University of Aarhus, Denmark, 1972-73
Fellow, American Council on Education, 1982-84
Fellow, American Heart Association, BCVS Council, elected 2011

Faculty: Emeritus Professor, UC Board of Trustees (2013)
President, UC Chapter of Sigma Xi – The Scientific Research Society (2010-2011)
Convocation Keynote Speaker (2009) – U. of Cincinnati
Just Community Award (Diversity Leadership) – U. of Cincinnati
Samuel Kaplan Visionary Award (Research and Innovation) – Am. Heart Assoc.
Martin Luther King, Jr. Scholarship (Diversity Leadership) – U. of Cincinnati
Faculty Achievement Award (Interdisciplinary Leadership) – U. of Cincinnati
American Council on Education Fellow (Univ. Administration) - U. of Cincinnati

Postgraduate: Special American Heart Association Fellow (Research) – Maine Medical Ctr
Senior Fulbright Fellow (Internat'l Scholars Exchange) – Aarhus U., Denmark
Postdoctoral Fellowships - National Institutes of Health (Advanced Research Training in Biomedical Engineering, and Biosensors) – U. Wash. /Scripps Clinic

Graduate: National Institutes of Health Fellowship, Boston U., Boston, Massachusetts
NASA Fellowship (Space Research), Wallops Island Tracking Station – U. Virginia

Undergraduate: Class President – Tufts U., Medford, Massachusetts
Irwin Travelli Scholar – Tufts U.

Secondary: Student Council President – Bassick High School, Bridgeport, Connecticut
Rotary International Scholar

FELLOWSHIPS

1982-1984 Fellow in Academic Administration, American Council on Education (Individual Award, 1 of 50 in USA), University of Cincinnati.

1973-1974 Special Postdoctoral Research Fellow, American Heart Association (Individual Award), Maine Medical Center, Portland.

1972-1973 Senior Fulbright Fellow & Scholar (Individual Award), International Exchange of Scholars, U.S. Department of State, Aarhus University, Denmark.

1971-1972 Postdoctoral Fellow, National Institutes of Health (Individual Fellowship), Scripps Clinic & Research Foundation and University of California at San Diego.

1969-1971 Postdoctoral Fellow, National Institutes of Health (Individual Fellowship) and American Heart Association (Individual Fellowship) Department of Physiology, College of Medicine, and Biophysics and Center for Bioengineering, Colleges of Medicine and Engineering, University of Washington.

1967 Predoctoral Fellow, National Aeronautics and Space Administration, Biotechnology Training Program at University of Virginia, Wallops Island Eastern Tracking Station, Virginia.

1964-1969 Predoctoral Fellow, National Institutes of Health (Training Grant Fellowship), Medical Sciences (Physiology), School of Medicine, Boston University.

ADMINISTRATIVE POSITIONS

2011-2013 Director, Graduate Studies - Molecular, Cellular and Biochemical Pharmacology Graduate Program. Chair, MCBP Graduate Education Committee. Administer, articulate, and iterate comprehensive doctoral degree program, with staff support and faculty participation, all aspects of new Safety Pharmacology emphasis MS degree program and existing PhD degree program.

2012-2015 Treasurer, Chair Committee on Finance, Cabinet Member, Board of Directors, and Executive Alliance, Sigma Xi – The Scientific Research Society, Inc. (international), Research Triangle Park, North Carolina. Oversee the investment portfolio and other assets to assure fiscal stability, sustainability and growth of the organization and its various programs for the benefit of its 4,000+ members and 100+ chapters advancing and applying knowledge through scientific research excellence.

2005-2012 Co-Director, UC/NSF IGERT Bio-Applications of Membrane Science and Technology, U. of Cincinnati. Designed and co-directed a cross-disciplinary graduate education and research training programs supporting more than 20 doctoral degree students in engineering, life sciences, chemistry, and pharmaceutical sciences.

2010-2011 Chairman, Dept. Appointment-Reappointment, Promotion & Tenure Committee. Coordinated peer-review of faculty dossier in accordance with guidelines, standards, and expectations of professional activities related to faculty appointments, reappointments, promotion and tenure in Pharmacology and Cell Biophysics, College of Medicine, University of Cincinnati

2010-2012 President (2010-2011) and Immediate Past President/Cabinet (2011-2012), Sigma Xi–The Scientific Research Society, Chapter #045, U. of Cincinnati. Established the UC Chapter's bylaws, programs, mission, vision and values of science and engineering research honor society with more than 150 graduate student and faculty members, and established Endowment Funds at UC Foundation. In November 2011, the UC Chapter received 2 national awards for its 2010-2011 accomplishments: UC Sigma Xi Chapter - Distinguished Program Award for "The 2011 UC Sigma Xi Future Symposium", and UC Sigma Xi Chapter -

Certificate of Excellence for exceptional overall chapter activity and innovative programming

2008-2009 Chairman, Darwin Sesquicentennial Celebration Program, U. of Cincinnati Provost's Office, at U. Cincinnati, engaging Greater Cincinnati community organizations and members of Greater Cincinnati Consortium of Colleges and Universities (GCCCU). This year-long multifaceted program gained regional and international reputation for innovative elements and excellence in improving science literacy as interfacing with public policy, law, political science, philosophy, religion, and the humanities.

2007-2013 Director, UC/ASPET SURF Program, American Society of Pharmacology and Experimental Therapeutics, U. of Cincinnati. Providing cross-disciplinary research training and professional development for 5 to 8 UC and non-UC undergraduate science majors during 10 weeks each summer. UC ASPET SURF Program presentation featured as exemplar at 2011 national meetings: Experimental Biology 2011, Washington DC in April and National Directors of Pharmacology and Physiology Graduate Programs, East Lansing, MI in July.

2005-2006/2007-2011
Director, UC/NSF REU Site Program in Membrane Applied Science and Technology, U. of Cincinnati. Providing cross-disciplinary research training and professional development for 10 or more UC and non-UC undergraduate science and engineering majors during 10 weeks each summer. A National demonstration Pilot Project supported additional training of 4 Cincinnati Public Schools high school science teachers and 2 high school students during 2008-2010.

1991-2001 Chairman, Radiation Control and Safety Committee, U. of Cincinnati
Provided oversight and internal assurance of compliance with federal and state guidelines and regulations, and laws regarding the use of radioactive materials and radiation generating devices in research and medical applications. Successfully transitioned licensure of the University's Broad Scope License from the US Department of Energy to the Ohio Department of Health.

1992-1999 Chairman, Institutional Animal Care and Use Committee, U. of Cincinnati
Provided oversight and internal assurance of compliance with federal and state guidelines and regulations, and laws regarding the use of vertebrate animals as research subjects. Articulated IACUC with Laboratory Animal Medical Services activities in support of research activities to assure regulatory compliance including appropriate training and skills of research team members and principal investigators.

1983-1984 Fellow, American Council on Education, Associate Vice Provost for Academic Affairs, U. of Cincinnati. Reported to and was tasked on special projects by Provost and Senior Vice President for Academic Affairs, Dr. Joseph A. Steger.

1982-1983 Fellow, American Council on Education, Special Assistant to Senior Vice President and Provost, U. of Cincinnati; Associate (Intern) of President Dr. Henry Winkler, U. of Cincinnati

FACULTY APPOINTMENTS

2013-present Emeritus Professor, University of Cincinnati

1987-2013 Professor, Pharmacology and Cell Biophysics
University of Cincinnati College of Medicine

1987-2005 Research Professor (secondary appointments) Internal Medicine (Cardiology Research), Radiology (Nuclear Medicine); University of Cincinnati Medical Center, Cincinnati.

1997-2005	Professor (secondary appointment), Materials Science and Engineering, University of Cincinnati, College of Engineering, Cincinnati.
1978-1987	Associate Professor, Pharmacology and Cell Biophysics, Head, Cardiovascular Pharmacology Section; Internal Medicine, Cardiology Division; University of Cincinnati Medical Center, Cincinnati.
1975-1978	Assistant Professor, Physiology, Division of Biological Sciences, Program in Medicine, Brown University, Providence.
1975-1978	Research Associate, Cardiology, Rhode Island Hospital, Providence.
1974-1978	Visiting Assistant Professor, Physiology, Hahnemann College of Medicine, Philadelphia.
1974-1975	Assistant Professor, Physiology and Internal Medicine, Harvard Medical School, Harvard University, Boston.
1973-1974	Research Associate, Maine Medical Center and the University of Southern Maine, Portland
1972-1973	Assistant Professor, Zoophysiology, Aarhus University, Denmark. Senior Fulbright Fellow & Scholar, International Exchange of Scholars.

GRADUATE STUDENT DISSERTATION COMMITTEES

- William C. Thomas (PhD, 1979); Department of Environmental Health, University of Cincinnati, *"The cardiotoxic effects of inhaled polymer pyrolysis fumes."*
- Ijaz Siraj Jamall (PhD, 1982); Department of Environmental Health, College of Medicine, University of Cincinnati, *"The role of selenium in protecting the rat against the cardiotoxicity of cadmium."*
- John Ngai (1980-1983 Ph.D. program (incomplete), MD 1987); Department of Pharmacology and Cell Biophysics, College of Medicine, University of Cincinnati, *"The effects of organic calcium entry blocking drugs on autonomic nervous system function."*
- Timothy Hickerson (MS, 1984); Department of Physiology, College of Medicine, University of Cincinnati.
- Roger Ian Hardy (PhD, 1988); Department of Physiology, College of Medicine, University of Cincinnati, *"Laser induced revascularization of the hypertrophied heart."*
- David Cox (PhD, 1993); Department of Pharmacology and Cell Biophysics, College of Medicine, University of Cincinnati, *"A role for the mitochondrial Na^+-Ca^+ exchanger in the regulation of oxidative phosphorylation and the consequences of its pharmacological inhibition in the mammalian heart."*
- Wilhelm Kossenjans (PhD, 1993); Department of Pathology and Laboratory Medicine, College of Medicine, University of Cincinnati, *"Mechanisms of the calcium paradox."*
- Xin Xu (PhD, 1996); Department of Pharmacology and Cell Biophysics, University of Cincinnati
- Nancy J. Roszell (PhD, 1997); Department of Pharmacology and Cell Biophysics, University of Cincinnati, Thesis Advisor, *"Analysis of factors affecting uptake of myocardial perfusion-imaging radiopharmaceuticals in rat cardiac myocytes."*
- Peter A. Russell (PhD, 1997); Department of Aerospace Engineering & Engineering Mechanics, College of Engineering, University of Cincinnati, *"Numerical solutions for the incompressible Navier-Stokes equations in primitive variables with low Reynolds number flow applications."*
- Metiner Tosun (PhD, 1997); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *"Regulation of vascular smooth muscle."*
- James Hall (MS, 1999); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *"The influence of cocaine pre-exposure on the acquisition of cocaine self-administration in the rat."*
- Mark Strobeck (PhD, 1999); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *"Regulation of voltage-dependent calcium channel activity via direct interactions with multiple intracellular proteins."*

- Sheryl Koch (PhD, 1999); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *"Studies on the secondary structure of L-type voltage-dependent calcium channel pore regions."*
- Nicole Tepe (MS, 1998; PhD 2000); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *"Beta-adrenergic receptor regulation in cardiac hypertrophy and contractile dysfunction."*
- Rajesh Dash (PhD, 2000; MD,2002); Department of Pharmacology and Cell Biophysics, University of Cincinnati; Physician Scientist Training Program
- Mark Williams (PhD, 2000; MD, 2002); Department of Pharmacology and Cell Biophysics, Physician Scientist Training Program University of Cincinnati, *"Disparate regulation of neutrophil pro-inflammatory functioning by CXCR-2 selective cytokines."*
- Andrew Carr (PhD, 2001); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *" A study on the role and regulation of the type-1 phosphatase in smooth and cardiac muscle contractility through the use of gene-targeted mice."*
- Jeffrey Marshall (PhD, 2002); Department of Pharmacology and Cell Biophysics, University of Cincinnati, *"Biochemical studies of Alzheimer's A-beta peptide deposition: identification of in vitro / in vivo A-beta amyloid imaging and inhibitory peptides."*
- Deborah Rathz (PhD, 2002; MD 2004); Department of Pharmacology and Cell Biophysics, Physician Scientist Training Program, University of Cincinnati, *"Characterization of the human beta$_1$-adrenergic receptor polymorphisms."*
- Ehab Hamed (PhD, 2002); Department of Industrial Pharmacy, Pharmaceutical Sciences, College of Pharmacy, University of Cincinnati, *"Pharmacokinetics of sustained release formulations of the renal diuretic drug, bumetanide."*
- Niloy Mukherjee (PhD, 2003); Materials Science and Engineering, College of Engineering, University of Cincinnati, *"Design and evaluation of an artificial cochlea for human implantation."*
- Elena Simona Draganoiu (PhD, 2003); Department of Industrial Pharmacy, Pharmaceutical Sciences, College of Pharmacy, University of Cincinnati, *"Design and evaluation of new matrices for sustained release of cardiovascular drugs."*
- Marta Rubio (PhD, 2005; Department of Pharmacology & Cell Biophysics, University of Cincinnati, *"A Model of cardiac hypertrophy and failure: characterization and mechanism(s) towards prevention of disease/phenotype."*
- Bharath K. Arunachalam (MS, 2005); Mechanical Engineering Department, College of Engineering, University of Cincinnati, *"Effect of heat transfer on the efficacy of hypothermic cold storage methods."*
- Julian Braz, (PhD, 2006; Department of Pharmacology & Cell Biophysics, University of Cincinnati, *"The role of calcineurin in the development of heart disease."*
- Anand Pathak (PhD, 2006; MD, 2007); Department of Pharmacology & Cell Biophysics, University of Cincinnati, *"Defects in calcium regulatory proteins in heart failure."*
- Abhijit Sinha Roy (PhD, 2006); Mechanical Engineering Department, College of Engineering, University of Cincinnati, *"Pressure-flow measurements and predictions with guidewires in normal and stenotic blood vessels in presence of flow reduction at conduit and resistance circuit elements."*
- Bryan Mitton (PhD, 2007, MD 2009); Department of Pharmacology & Cell Biophysics, Physician Scientist Training Program; University of Cincinnati, *"The role of protein phosphatase inhibitor 1 in regulation of calcium cycling and muscle performance in heart muscle cells."*
- Juyoung Park (PhD, 2008); Mechanical Engineering Department, College of Engineering, University of Cincinnati, *"Intra-vitreal drug delivery by timed release implants with pharmacokinetic modeling."*
- Craig Bolte (PhD, 2008); Department of Pharmacology & Cell Biophysics, University of Cincinnati, *"The Role of Opioid Receptors in the Normal and Failing Heart."*
- Keith J. Gaddie (PhD, 2010); Department of Pharmacology & Cell Biophysics, Yates Scholar, University of Cincinnati, *"Ecto-ATPase Structure and Function."*
- Michael Tranter (PhD, 2010); Department of Pharmacology & Cell Biophysics, IGERT Program in Membrane Applied Science & Technology, University of Cincinnati, *"Therapeutic Delivery of Gene Therapy to Cardiac Muscle Cells with Novel Synthetic Polymers."*
- Jennifer R. Hurley (PhD, 2011); Department of Biomedical Engineering, IGERT Program in Membrane Applied Science & Technology, University of Cincinnati, *"Tissue Engineering Strategies for Cardiac Regeneration."*

- Chi Keung Lam (PhD, 2012); Department of Pharmacology & Cell Biophysics, American Heart Association Predoctoral Fellow, University of Cincinnati, *"The Role of Hematopoietic Lyn Substrate-1 Associated Protein X-1 (HAX-1) in Cardiac Contractility and Cardioprotection.*"
- Adeola Adeyemo (PhD, expected 2013); Department of Pharmacology & Cell Biophysics, NIH NHLBI Predoctoral Fellow in Mechanism of Heart Failure, University of Cincinnati, *"Molecular Signals for Angiogenesis."*
- Alexander Ross (PhD expected 2015); Department of Pharmacology & Cell Biophysics, University of Cincinnati, *"Computational Predictions and Validations of Drug Affinities of CNS Doa=pamine-2 like Receptors"*

MS Pharmacology Students (Major Advisor)

- Mianna Armstrong: Hampton University (B.S., May, 2012), University of Cincinnati (M.S. in Safety Pharmacology, August, 2013) Current position: applicant to MD schools (incl. U. Calgary, and U. Alberta)
- Amanda Harrell: Ohio University (B.S., May, 2012), University of Cincinnati (M.S. in Safety Pharmacology, August 2013). Current position: enrolled U. Cincinnati College of Medicine, August 2013
- Luke Umana: Indiana University (B.S., May 2012), University of Cincinnati (M.S. in Safety Pharmacology, August 2013). Current position: enrolled Indiana University College of Medicine, August 2013

TRAINEES

Undergraduate Research Scholars	Home Institution
2005-2011: 70+ undergraduate trainees	ASPET SURF/NSF REU Site Programs (Various institutions)
Kyle McIntosh (2012)	University of Toledo
Aisha Nuhu (2009-2012)	University of Cincinnati (MPH, SLU, 2012)
Brittney Hudson (2010)	University of Cincinnati
Robin Wright (2007-09)	University of Cincinnati
Rosalynd Mincy (2005-07)	University of Cincinnati
Michael Tranter (2003)	Rose-Hulman Institute of Technology
Ron Gutmark (2002-03)	Stanford University
Cedric Bobst (ASPET Fellow, 1998)	University of Cincinnati
1997: 5 Undergraduate trainees	ASPET SURF Program (Various institutions)
1993-1997: 75 underrepresented minority NHLBI	various institutions
Christian Fisher	University of Cincinnati
Christopher Leidigh	Brown University, Providence
Farah Minhas	University of Cincinnati
Joel Reginelli	Miami University, Oxford
Melinda Ryan	University of Michigan, Ann Arbor
Jenelle Simon	Xavier University, New Orleans
Kristin Van Horne	Williams College, Williamstown
Rodrek Williams	Xavier University, New Orleans
James Marbury	University of Arkansas at Pine Bluff
Sarah Moore	Xavier University, Cincinnati
Kim Kurak	University of Cincinnati

Medical Student Summer Scholars	
Sung Kim (Parkinson's Fndtn. Fellow, 2011)	University of Cincinnati
Jessica Wen (NIH MSSRP Fellow, 2011)	University of Cincinnati
Robert Brower (MD student)	University of Cincinnati
Christopher Fortner (MD/PhD student)	University of Cincinnati
Christopher Cooper (MD student)	University of Cincinnati
Michael Lauer (MD student)	University of Cincinnati
Peter Hucek (MD student)	University of Cincinnati
Kenneth Bodziack (MD student)	University of Cincinnati

Postdoctoral Fellows/Visiting Scientists: 1990-Present	
Hema Pandragi, M.D.	Cardiologist, Dayton, OH
Mustafa Ahmed, M.D.	Volunteer Research Fellow, Columbus, OH

Raymond Santucci, M.D.	Resident, Internal Medicine, Univ. Cinti.
Paul Guichard, D.O.	Cardiologist, Charleston, SC
Lou Vadlamani, M.D.	Cardiologist, The Ohio State University
Nick Dubrilovic, M.D.	Cardiothoracic Surgeon, New Haven, CT
Ram Kalya, M.D.	Cardiologist, Milwaukee. WI
Ilona Bodi, Ph.D.	Research Scientist, University of Cincinnati
Anthony McGoron, Ph.D.	Assoc. Professor and Interim Chair, Biomed. Engineering, Florida International U., Miami
Timo Nevalainen D.V.M., Ph.D.	Director, National Animal Laboratory, University of Kuopio, Finland
John S. Plowden, M.D.	Associate Professor of Pediatrics, Pediatric Cardiologist, Emory University, Atlanta, GA
Kishin Ramrakhyani, M.D.	Cardiologist, Chicago, IL
Genzou Takemura, M.D., Ph.D.	Professor, Kyoto University, Japan
Louis A. Cannon, M.D.	Cardiologist and Founder, Michigan Cardiovascular Institute, and Manager, Bio-Star Private Equity Fund
Elizabeth D. Dunlap, Ph.D.	Director of Project Management Sagent Pharmaceuticals, Chicago
M. Pauliina Margolis, M.D., Ph.D.	Vice President, Scientific Affairs & Chief Medical Officer, Volcano Corporation, San Diego, CA
Shannon P. Williams, Ph.D.	VP Therapeutic Development, PGxHealth, LLC, Charlottesville, VA
Xiu Chen, M.D	Professor and Chairman of Pharmacology Hunan Medical College, China
Kru Fairey, M.D.	Pediatric Cardiologist Children's Hospital Medical Center
David Hannon, M.D.	Associate Professor, Pediatrics University of Cincinnati Medical Center
Yitzack Hermoni, M.D.	Georgia Heart Care, Emory University Atlanta, GA
Hisayoshi Fujiwara, M.D.	Professor, Internal Medicine Kyoto University Medical School, Japan
Keizo Inoue, M.D.	The Heart Institute of Japan Tokyo Women's Medical College
Hiroshi Kobayashi, M.D.	Professor Central Institute for Electron Microscopy, Nippon Medical School, Japan
Goro Asano, M.D.	Professor and President Nippon Medical School, Tokyo, Japan
Taku Nagao, M.D.	Chairman Emeritus, Pharmacology & Toxicology, University of Tokyo, Japan
Yonejiro Nakajima, M.D.	Associate Professor (deceased), Surgery Nippon Medical School, Japan
Haruaki Nakaya, M.D.	Professor and Chairman, Pharmacology Chiba Medical School, Chiba, Japan
Yuji Okihama, M.D.	Assistant Professor, Surgery Nippon Medical School, Japan
Dale Parks, Ph.D.	Associate Professor, Anesthesiology University of Alabama, Birmingham
Kikuo Sakai, M.D.	Professor, Cardiology, Kyroher University School of Medicine, Kyushu, Japan
Tom Schroder, M.D.	Professor, Surgery Helsinki University Central Hospital, Finland
Kouichi Tamiya, M.D.	Assistant Professor, Surgery Tokyo Women's Medical College, Japan
Yoshiya Tsuchiya, M.D.	Associate Professor, Surgery Nippon Medical School, Japan
Kozo Watanabe, Ph.D.	Research Associate, Pharmacology Yamanashi Medical College, Japan

Youichi Yabuuchi, Ph.D.	Director, Otsuka Pharmaceutical Co., Ltd. Japan
Walter Sobczyk, M.D.	Pediatric Cardiologist University of Cincinnati Medical Center

CONTINUING PROFESSIONAL EDUCATION

- Safety Pharmacology - Preclinical Endpoints in Toxicology Studies: Central Nervous System; Webinar, 11am-12:30pm, September 20, 2012
- Safety Pharmacology - Preclinical Endpoints in Toxicology Studies: Cardiovascular System; Webinar, 11am-12:30pm, September 25, 2012

TEACHING/EDUCATION INNOVATION (examples since 2010):

- June-August 2010: Summer Undergraduate Research Training Program (ASPET SURF) including ethics, and oral and written communication emphasis
- September 2010: Designed a New Graduate Course titled *"Systems Pharmacology"* (#26MCBP827). First Delivered in Winter Term 11W; annually thereafter
- March 2011: Designed and New Graduate Course titled *"New Drug Discovery I – Preclinical Development"* (#26MCBP710). First Delivered in Autumn Term 11A, annually thereafter
- September 2011: Restructured weekly Pharmacology Graduate Seminar series for 2011-2012 academic year
- September 2011: Established Pharmacology Professional Development *"How to...."* lecture series for graduate students and faculty for 2011-2012 academic year
- September 2011: Established Visiting Pharmacology Professor Series and Research Frontiers Series for pharmacology graduate students and faculty for 2011-2012 academic year
- September – December 2011: Designed and delivered new graduate pharmacology course titled *"New Drug Discovery: Preclinical Development I"*
- December 2011: Designed New Undergraduate Pharmacology Course titled *"Drugs and Performance – The Inside Story" for* Honors Program, University of Cincinnati. Proposed delivery in Spring Semester, 2013.
- May 2013: Methods in Preclinical Safety Pharmacology – *Cardiovascular and Respiratory Systems Evaluation*: Methods, Procedures, Instrumentation, and Data Sets for MS degree students in Preclinical Safety Pharmacology curriculum, University of Cincinnati

SERVICE

Department Committees

All Alumni Retreat/Reunion/Symposium Planning Committee – Faculty liaison (2013-2014)
Reunion of 1978-2013 PhD graduates will occur in late April 2014;
V. Kadambi (Takeda Oncology Pharma-Cambridge, MA) chairs planning committee
National Directors of Graduate Studies in Pharmacology and Physiology
Planning and Host Committee (2013-2015) - UC will host 2015 meeting
Graduate Studies in Pharmacology - MS/PhD Program (Director, 2011-2013)
Appointments, Promotions & Tenure (Chair 2010-2011, member 2010-13)
Safety Pharmacology Faculty Development Workshop (co-chair, 2010-11)
MCBP Graduate Program (Director, 2011-2013)
GEC Subcommittee on Graduate Curriculum Development (2010-present)
Graduate Education, Recruitment & Admissions (active member, past Chair)
Medical Education & Medical Pharmacology Course Steering Committee
(Course co-Director/Director 1983-2006; active member thru 2011)
Pharmacology Doctoral Qualifying Examination Committee (active member)
Pharmacology MS Degree and Curriculum Development Committee (member, past Chair,)
Faculty Retreat Coordinator (twice)
Faculty Search Committees (past Chair)
Visiting Faculty Scholars Committee (past member)
Merit Review Committee
Research Practices and Procedures Committee

College Committees

Graduate Education Committee (member, 2011-2013)
LCME Self-Study Task Force, Academic Environment Working Group, Diversity

Subcommittee (member, 2010-2011)
Curriculum Expert Panel for the Physician and Society New Course Planning (member, 2010-2011)
Medical Center Fund Investment Advisory Committee (member, 2005-present); Ad Hoc Review Committee - Medical Center Fund's Investment Goals and Objectives (member, 2011-2012)
Medical Student Year 2 Promotions Committee (1985-2006)
Medical Admissions Committee (1985-1995, 2003-2005)
Medical Curriculum Coordinating Committee (member, 2001-2005)
Basic Science Curriculum Committee
Judicial Appeals Committee (Chair, ad hoc, various dates)
Animal Care Committee (1990-2000, member)
Student Affairs Task Force (former Chair)
Departmental Review Committee
Research Malpractice Review Committee
Basic Science Support Grant Review Committee
Graduate Education Committee (Member, active)
Physician Scientist Training Program (former executive committee and minority recruitment committee member)
REACH Program for Undergraduate Minority Scientists (Director/PI Investigator, 1992-1998; NIH-NHLBI Sponsored T35 training grant)

University Committees

UC Sigma Xi – The Scientific Research Society - Young Investigator Awards (2012-2013)
UC Faculty Panel Review on Doctoral Program Strategies for Excellence (2011-2012)
Proudly Cincinnati, Faculty/Staff Campaign (Department Chair, 2011-2013)
UC *Life of the Mind* Steering Committee (member, 2011- 2013)
UC Selection Committee for Goldwater Scholarship Nominees (member, 2011-2012)
UC Foundation Strategic Planning Subcommittee on UCF Board of Trustees/Volunteers (appointed by UC Provost Santa Ono, member 2011-2013)
Provost's Graduate Fellow's Advisory Group (appointed by UC Provost Santa Ono, member, 2010-2012)
UC Foundation Advisory Committee, *Proudly Cincinnati* Faculty/Staff (member, 2009-2012)
UC Advisory Committee, Responsible Conduct of Research (member, 2009-2012)
UC/CCHMC Advisory Committee, Cincinnati Clinical & Translational Science & Training Center (member, 2010-present)
UC University Research Council (member and Life Sciences Review Panel Chair, 2009-2012)
UC Rieveschl Award for Creative and/or Scholarly Works Committee (member, 2008-2010)
UC Graduate School Annual Report Advisory Committee (member, 2009)
UC NASULGC Resolution-Access to Scholarly Products Committee (member, 2009)
UC Darwin Sesquicentennial Celebration Committee (Chair, 2008-2009)
UC Undergraduate Research Council (charter member, 2007-present,)
UC Faculty Senate, (At Large Senator, 2007-09)
UC Faculty Senate, Faculty Research & Scholarship Committee (member and Chair, 2006-2009)
UC IGERT NSF Training Program (active, co-PI, 2005-2011)
UC|21 Grow Our Research Committee, Presidential Appointment (member, 2005)
UC Graduate Fellowships Selection Committee (Yates, Editorial, Regents, etc.)
UC Fulbright Scholars Selection Committee-UC VP Research Appointment (member, 2003)
UC/CWRU Center for Cardiovascular Biomaterials (Director, 1993-98)
UC Biomedical Engineering Program Steering Committee (member, 1990-98)
UC/CCHMC/TUH/Shriner's Radiation Safety Committee – UC Sr. VP Appointment (Chair, 1991-2001)
UC/Shriner's Institutional Animal Care & Use Comm., Sr. VP Appointment (Chair, 1992-99)
UC Academic Review of College of Arts & Sciences, VP Appointment (member, 1998)
UC LAMS Search Committee, Director Laboratory Animal Resources (member, 1990-91)
UC Minority Affairs Graduate Committee (member, 1990 -95)
UC Graduate Minority Scholars Selection Committee (member, 1987-97)

Community

Board of Trustees, American Heart Association of SWO (active member, 1996-2013)
Co-chair, AHA Committee on "Get with the Resuscitation Guidelines" – Improving

Quality of Cardiovascular Healthcare in Greater Cincinnati Hospitals (2012-2013)
UC COM Investment Advisory Committee, Medical Center Fund (active member, 2005-present), Contributions & Expenditure Oversight Subcommittee (2012-present)
SW Ohio Regional Science and Engineering Expo (2011 Science Fair), Awards in computer science or computer use in science, biological sciences, and mathematics or math/statistics use in science, (Sigma Xi judge, March 12, 2011)
UC Honors Program Retreat – First Year Experiences Panel, Brooksville, IN (panelist, 2010)
APPE Intercollegiate Ethics Bowl National Championship Competition (judge, 2010 & 2011)

Regional/National/International

Sigma Xi Society – The Scientific Research Honor Society (International) (2012-present)
Treasurer, Committee on Finance (chair), Executive Compensation Committee (Chair), Board of Directors (member), Executive Committee (member)
Westlaw Round Table Group: Expert Witness Search and Referral Services – Thomson Reuters (expert, 2005-present)
National Institutes of Health (Bethesda, MD)
NIH-wide/National Institute of General Medical Science:
2010/08 ZRG1 SBIB-V (58) R - NIH Director's Pathfinder Award to Promote Diversity in the Scientific Workforce, 2010
National Heart Lung & Blood Institute: Special Emphasis Panel, 2002-03, ad hoc; T32 Review Panel (ad hoc via M Ashraf), 2009
National Center for Research Resources: INBRE Study Section, 2005 and BRIN Study Section, 2001/02/04
National Science Foundation (Arlington, VA)
Engineering Education Directorate: REU and RET SITE Program Panel, 2007
National Research Council (Washington, DC)
Ford Foundation: Minority Dissertation and Postdoctoral Fellowships, Selection Committee, 1993-96 and 2001-05
International Symposium on Blood Substitutes (San Diego, CA):
Program Planning Committee, San Diego, 1992-93
International Society for Heart Research Cincinnati, OH and San Diego, CA)
North American Section Annual Scientific Meetings: Co-chair, Organizing Committee and Chair, Fundraising Committee, Cincinnati, 1990-91; Member, Organizing and Fundraising Committees, San Diego, 1998-99
Triennial International Meeting: Member, Scientific Program Committee, Winnipeg, 2001
National Board of Medical Examiners, (Philadelphia, PA): STEP I USMLE, Pharmacology and Integrative Question Writing and Validation Panel, 1987-90
American Heart Association
National Center (Dallas, TX): National Scientific Sessions, Abstract Selection, 1982-1996; Scientific Sessions, Chair, 1977-96
Ohio Affiliate (Columbus, OH): SURF Program Selection Committee (2003-05); Ad-Hoc Reviewer (1985-96); Research Peer Review Committee (Member) (1990-96); Young Investigatorship Task Force (Chair, 1990-91); Research Committee (Member, 1991-96)
Southwest Ohio Affiliate; Research Advisory Committee (Chair, 1991-96)
Council for International Exchange of Scholars (Washington, DC)
Fulbright Program Advisory and Selection Subcommittee for US Scholars to Scandinavia; (1984-86, Chair)

BIOLOGY FIELD RESEARCH

1985 and 1992	Circulatory Dynamics in the Southern Africa Giraffe (Expedition to Pretoria, South Africa and Henry Doorly Zoo, Omaha, Nebraska)
1979-1983	Coronary Circulation in North Pacific and Bering Sea Marine Seals (Locations: Fairbanks/Homer, Alaska; San Diego, California; London, England)
1978	Biology of Western Caribbean Green Sea Turtles (Scripps Oceanographic Expedition based at Puerto Limon, Cost Rica)
1970-1971	Biology of Antarctic Birds and Fish (Scripps Oceanographic Expedition to Palmer Station-USA, Antarctica)

PROFESSIONAL SOCIETIES

American Society of Pharmacology and Experimental Therapeutics
(member, Integrative, Cardiovascular, and Teaching Sections)

Sigma Xi Society (Treasurer; 2012-present; President, University of Cincinnati Chapter #045, 2010-2011; Local and National Executive Committees 2011-2016; Member #20100450001)
American Physiology Society (member, Comparative Physiology Section)
American Heart Association (elected Fellow of Basic Science Council November 2011; Member #99528174)
American Heart Association – Great Rivers Affiliate (member, Board of Trustees, term ended 2013)
American Council on Education (member, Council of Fellows; Fellow, 1982-83)
Fulbright Association (member, Senior Fellow, Denmark, 1972-73)
Biomedical Engineering Society (inactive)
International Society for Heart Research (inactive)
International Society on Oxygen Transport to Tissues (inactive)

JOURNAL REVIEWER (*ad hoc*)

Cardiovascular Research, Circulation, Journal of the American College of Cardiology, Journal of Molecular and Cellular Cardiology, Journal of Cardiovascular Pharmacology, Pharmacotherapy, The American Journal of Physiology: Heart and Circulatory Physiology; Regulatory, Integrative and Comparative Physiology, The Canadian Journal of Physiology and Pharmacology, The Journal of Clinical Investigation; Journal of Nuclear Cardiology

CONSULTANT

- Cardiocentis, Inc., Cincinnati, OH [Cardiovascular consultant, 2010-2011]
- CardioEnergetics, Inc., Cincinnati, Ohio [Scientific Advisor on Medical Devices, 2001-05]
- Sutter, O'Connell, Mannion, & Farchione, Cleveland, Ohio [Cardiovascular physiology & pharmacology consultant and expert witness, 2002-05]
- Dinsmore and Shohl, LLP, Cincinnati, Ohio [Cardiovascular physiology & pharmacology consultant and expert witness, 2000-05]
- Enable Medical Corp, Cincinnati, Ohio [Scientific Advisor on Medical Devices, 2000-01]
- Institute for Health Policy and Health Service Research, Cincinnati, Ohio [Scientific Expert on Heart Valve, Scientific Establishment Panel, 2000-01]
- International Society for Heart Research, Winnipeg, Manitoba, Canada [Scientific Advisory Board, Winnipeg, Manitoba, Canada, 2000-01]
- Radiology Associates, Inc., Cincinnati, Ohio [Scientific Advisor on radiological materials with cardiovascular applications, 1990-2000]

RESEARCH CENTER AFFILIATIONS

Colleges of Medicine & Engineering
NSF Integrative Graduate Education, Research and Training (co-Director, 2005-present)
Cardiovascular Center of Excellence (Investigator, 2008-present)
Cardiovascular Bio-Materials Research Center (Director & Principal Investigator, 1993-1997)
NSF Membrane Applied Science and Technology (MAST) Center (Co-Investigator)

GRANT REVIEWER HISTORY

- NIH, NHLBI, NIGMS, NIDA, NCRR (*ad hoc*, through 2010)
- National Research Council-Ford Foundation (two 3-year terms through 2005)
- Council on International Exchange of Scholars – Fulbright Program (one 3-year term)
- National Science Foundation (*ad hoc* mail reviews)
- Veterans Administration - Merit Review (*ad hoc* mail reviews)
- American Heart Association - Ohio Affiliate (1980 through mid 1990s)

GRANTS & CONTRACTS FUNDED or UNDER CURRENT REVIEW (2000-2011)

RESEARCH GRANTS & CONTRACTS:

MicroRNA as mediators of angiogenesis and ischemic myocardial repair (National Institutes of Health – National Heart, Lung, and Blood Institute); M. Xu (PI), **R.W. Millard is Co-Investigator (8% effort, 1.02 calendar months)**, $2,659,019, 10/1/12-9/30/17, submitted 9/16/11, reviewed 12/2011; scored at top 1st percentile. Award start expected October 1, 2012

iPS cells-derived progenitor cells for angiomyogenesis (National Institutes of Health – National Heart, Lung, and Blood Institute); Y. Wang (PI), **R.W. Millard is Co-Investigator (5% effort, 0.6 calendar months),** scored at top 1st percentile, funded, $3,005,208, 8/1/11-7/31/16.

A Novel Approach to Enhance Cell Therapy for Myocardial Regeneration (National Institutes of Health – National Heart Lung and Blood Institute);; Yi-gang Wang (PI), **R.W. Millard is Co-Investigator (5% effort, 0.6 calendar months);** total direct 5-year award $1,950,000, funded 7/21/2008-7/20/2013.

EDUCATIONAL GRANTS:

Research Experience for Undergraduates (REU) Site Program in Membrane Applied Science and Technology (National Science Foundation) Provide summer research training opportunities for 12 undergraduate science and engineering students with faculty mentors in Colleges of Engineering, Medicine, Pharmacy and Arts and Sciences. Competitive NSF Renewal Proposal No: 00647677; Title: REU Site Program in Membrane Applied Science and Technology (MAST); total direct award $290,000, **funded 4/1/07-3/31/10**. **RWM is PI and Program Director; RET Supplement** (2008-09); funded 4/1/08-03/31/09: $20,000 for two H.S. STEM teachers; **RET Supplement** (2009-2010): **funded 4/1/09-3/31/10**: $24,250 for two H.S STEM teachers + two H.S. STEM students; **No cost Extension**; **funded through 3/31/2011**; **RET Supplement** (2010-2011); funded 4/1/2010-3/31/2011. Competitive Renewal submitted 8/25/10, 4/1/11-3/31/16; $768,405; **R.W. Millard is PI and Program Director** (5% effort), not funded. (revised competitive proposal not submitted)

American Society of Pharmacology & Experimental Therapeutics (ASPET) SURF Program: Summer Undergraduate Research Fellows (SURF)Training Program in Pharmacology & Toxicology; 30 undergraduate research trainee positions for 10 weeks in summer; 6 year duration; **R. W. Millard is PI and Program Director,** total = $159,000; [ASPET = $54,000; UC VP for Research match = $30,000; UC COM match = $30,000; UC COP match=$15,000; P&CB Department & PI matches = $30,000]; funded 1/1/07-12/31/12. J.J. Schultz assumed PI role on 9/1/11, R.W. Millard continues as Co-director.

IGERT: Bio-Applications of Membrane Science and Technology; National Science Foundation (IGERT Program); an integrated graduate education and research training (IGERT) program centered on pharmaceutical, bio-sensor, and biomedical applications of membrane science. The program supports the development and establishment of an interdisciplinary graduate training program, international cultural and technical exchanges, and recruitment of new faculty, and support and encouragement of research with university-industry collaborations. PI is David Butler, Ph.D.; **R. W. Millard, Ph.D. is Co-PI.** Direct: $3,357,796; Total: $3,559,819; funded 10/15/2003 to 10/14/2008 (no cost extended on 8/26/11 through 10/14/2012).

Faculty Development Award: Safety Pharmacology and MS Degree Development University of Cincinnati; M.A. Matlib (PI), **R.W. Millard is Co-I (5% effort)**, funded for academic 2010-2011, $9,000

UC NIH CCTST Award: Safety Pharmacology Workshop UC/CHMC Center for Clinical Translational Science and Training; **R.W. Millard is PI (1% effort)**; funded for academic 2010-2011, $3,000

Previous Funding (partial list):

Ohio Global Cardiovascular Innovation Center: Remote Protection of Myocardial Ischemia, Awarded to Cardiocentis, Inc. and UC, W.K. Jones and N. Weintraub (PIs), **R.W. Millard is Co-I (2+% effort)**; funded $1+M, 2010-2012; resigned as co-I in 2011.

Ohio Global Cardiovascular Innovation Center: Wright Megacenter of Innovation (WMI) Award, Ohio Technology Division of the Ohio Department of Development – The Third Frontier Commission; Cleveland Clinic Foundation, University of Cincinnati (W. Merrill, PI), CardioEnergetics, Inc (D. Melvin, PI, deceased 11/08/08) submitted 8/29/06; **R.W. Millard is Co-Investigator** as cardiovascular physiologist/pharmacologist on ventricular assist device development. Total direct award $454,546; funded 1/1/2007 to 12/31/2012

American Heart Association: "Influence of guide-wire catheter on pulsatile flow rate-pressure diagnostics in significant coronary stenoses;" PI is R. Banerjee is PI, **R.W. Millard is Co-I**. Total direct award = $260,000; funded 7/1/2003 to 6/30/2007

Ohio Board of Regents Incentive Fund Grant Program; Catalyze UC's Membranes for Applied Science and Technology (MAST) Center research efforts in the areas of biomedical and pharmaceutical applications of membrane science and technology. Funds to be divided equally among 5 co-investigators. W.B. Krantz is PI; R.W**. Millard is lead Co-PI** for the College of Medicine. Total direct award = $127,500; funded 8/1/2002 to 7/31/2007.

Research Experiences for Undergraduates (Bio-Applications of Membrane Science and Technology): REU Site Program in Membrane Applied Science & Technology**,** National Science Foundation**.** A 10-weeksummer residential research program in membrane technology for undergraduate in chemical engineering, chemistry, pharmacology, biochemistry, biochemistry, bioengineering, materials science, and related fields. W. B. Krantz, Ph.D PI from April, 2002 to December, 2004. **R. W. Millard, Ph.D., PI and Program Director** from January, 2005 to March, 2007. Total Direct = $253,702; funded 4/1/2002 to 3/31/2007.

Short-term Medical Student Training Grant (T35), National Institutes of Health-NIDDK (#T35-DK0609444-02; Direct: $106,780/year; Total: $115,322/year; an 8-week summer research program for medical students to explore the scientific basis of medicine and encourage career decisions in academic medicine and medical research with human translation impact. J. E. Heubi, M.D. is PI; **R. W. Millard, Ph.D. is training mentor.** Funded 4/1/2002 to 3/31/2007

NIH-SBIR Subcontract through Enable Medical Corp, Cincinnati, Ohio
Project evaluates and provides data for re-engineering and design refinement of new medial devices intended for commercialization and eventual human use in hemostasis, incision and tissue ablation procedures. **R.W. Millard is PI** of subcontract. Total direct subcontract award = $50,000; funded 7/1/2000 – 6/30/2002.

EDUCATIONAL INNOVATIONS (examples)
Research Training Programs Designed and Years Implemented:
1993-1997: Summer training program in heart lung and blood for undergraduate students underrepresented in biomedical science careers, University of Cincinnati College of Medicine
1999: Undergraduate summer research training program in pharmacology, University of Cincinnati College of Medicine
2004- 2012: Graduate training program in bio-applications of membrane science and technology, University of Cincinnati College of Medicine
2004-2011: Undergraduate, high school, and high school STEM teacher summer training program in membrane applied science and technology, University of Cincinnati College of Medicine
2006-2012: Undergraduate summer research training program in pharmacology, toxicology, and pharmaceutical sciences, University of Cincinnati Colleges of Medicine & Pharmacy.

Courses Designed and Year Implemented:
1990-present: Laboratory Rotations for graduate students in biomedical sciences, PSTP, and PhD programs, University of Cincinnati College of Medicine
2010-2011: Systems Pharmacology (26MCBP8027), graduate course, University of Cincinnati College of Medicine
2011-2012: New Drug Discovery-Preclinical Development (26MCBP7010), graduate course, University of Cincinnati College of Medicine
2012-2013: Seminars in Pharmacology: A Survey of Drug Receptors (Fall Semester, 26MCBP8005) and Vaccines, Cells and Protein Therapies (Spring Semester, 26MCBP8006), graduate courses, University of Cincinnati College of Medicine

VISITING PROFESOR - INVITED LECTURES:

- *"The Future STEM Workforce: Emerging Opportunities"*@ UC Biological Sciences, April 8, 2013
- *"Challenges to Academic Career: Especially for Women with PhD Degrees"* Careers Colloquium @ UC Chemistry, November 30, 2012
- *"Human Research and Ethics: The Intersection of Educational Disparities and Common Good"* Great Conversations: Helena Education Foundation, Helena, Montana, November 14, 2012 (http://hefmt.org/)
- *"Shaping A Career in Science through Serendipity, Curiosity, and Uncertainty"* Biology Careers @ UC Biological Sciences, October 12, 2012
- *"Mentoring – Shaping the Mentor-Mentee Relationship",* IGERT Trainees and BME Capstone Seminar, College of Engineering and Applied Science, University of Cincinnati, hosted by Prof. David Butler, January 23, 2012 (*Introduction to IGERT Research*, 20BME700)

- *"Discovery Research Advancing Cardiovascular Health",* Biomedical Engineering, College of Engineering, Florida International University, Hosted by Prof. Anthony J. McGoron, January 13, 2012
- *"Advanced Degrees Leading to Careers in Pharmacology",* Chemistry, Biology and Toxicology, Ashland University, Ashland, OH, Hosted by Jeff Weidenhamer, Professor of Chemistry, November 10, 2011
- *"Selling Sickness-Conflicts of Interest in Health Policy and Practices in Drug Marketing"*, Bioethics (15PHIL302), Philosophy Department, University of Cincinnati, hosted by Prof. Koffi Maglo, November 8, 2011
- *"Cardiovascular Biomechanics",* College of Engineering and Applied Science, University of Cincinnati, hosted by Prof. David Butler, November 8, 2012 *(20BME621 Tissue Biomechanics)*
- *"Drugs Approved for Use in Specific Populations"* Philosophy and Race (15PHIL353), Philosophy Department, University of Cincinnati, hosted by Prof. Koffi Maglo, May 19, 2011
- *"In Silico Vertebrate Cardiovascular Models for Integrative Systems Physiology, Pathology and Pharmacology."* Research Seminar, invited speaker, Math-Bio Section, Mathematics Department, University of Cincinnati, May 3, 2011.
- *"Summer Undergraduate Research at the University of Cincinnati – Training Next Generation Pharmacologists,"* invited speaker for *"ASPET Teaching Institute: Creating Educational Partnerships from High School to Graduate School,"* American Society of Pharmacology and Experimental Therapeutics, Experimental Biology Annual Scientific Meeting, Washington, DC., April 9, 2011.
- *"Research Opportunities Night: How To Locate UC Biomedical Faculty whose Research Interests Me"* invited speaker, UC Undergraduate Freshman: Choose Ohio First – Health Professions Scholars, University of Cincinnati, March 1, 2011
- *"Avoiding Pitfalls and Barriers to Health Careers Development"* – HCARE and SPEP trainees, College of Medicine, University of Cincinnati, July 16 and July 22, 2010.
- *"Research Now! - Integrating Research in Your Undergraduate Degree"* – New Student Convocation 2009, featured speaker, 5th/3rd Arena, University of Cincinnati, September 20, 2009.
- *"Making the Most of Your Education – A Bridge to the Unknown!"* – Undergraduate Student Orientation Leadership Group, Division of Student Affairs and Services, University of Cincinnati, September 14, 2009.
- *"Of Yeast and Stem Cells"* – Research and Creative Arts (38HNRS380H) – Undergraduate Honors Program, University of Cincinnati, April 9, 2009.
- *"A Teaching and Research Career in Higher Education; Current Research: Stem Cells for Heart Tissue Regeneration"* – Introduction to Research and Careers in Biology (Biology 321), Undergraduate Biology Majors, May 1, 2009.
- *"Charles Darwin's Biology"* – a critical analysis for the Taft Research Center for the Humanities, University of Cincinnati, January 29, 2009.
- *"Charles Robert Darwin – the man, his observations and enduring impact – a bicentennial retrospective"* – Department of Graphic Design (senior studio class), College of Design, Art, Architecture and Planning, University of Cincinnati, January 8, 2009.
- *"Molecular Imaging with Engineered Chemical Reporters of Bio-Membrane Proteins and Transporters - Programmed Cell Death and Nerve Disorders in Heart Failure"* – Chemical and Materials Engineering Faculty Seminar, University of Cincinnati, February 22, 2008.
- *"Systems Approach to Cardiovascular and Renal Drug Actions: Physiology and Pharmacology"*, Egyptian Pharmaceutical Manufacturers Association, Cairo, Egypt, December 15, 2002. (declined)
- *"Myocardial ischemia and its detection with 99m-technetium radiochemicals*" – Nippon Medical School, Tokyo, Japan, May 6, 2001. <u>*Journal of Nippon Medical School*</u>. 68(5): 450, 2001.
- *"Biomechanical Performance of Normal and Failing Heart Muscle Cells"* – International Conference on Pathophysiology and Drug Therapy of Cardiovascular Disorders, Punjabi University, Patiala, India, January 22-26, 2001. (declined)
- *"Therapeutic Adjustments in Cardiac Adrenergic Functions in Normal and Failing Hearts*" – XXIII World Congress of the International Society for Heart Research, Winnipeg, Manitoba, Canada, July 6-11, 2001. (declined)
- *"Calcium: A Target of Chemicals (Drugs) for Heart and Blood Vessel Diseases"* – presented at the College of Mt. St. Joseph, February 14, 1997.
- *"Chemicals to Modify Circulatory System Physics for Improved Cardiovascular Biology"* – presented at Northern Kentucky University, March 11, 1997.

- *"Heads Up! Siphons, Suction and Brain Oxygen in Tall Terrestrial Animals*" – presented at the Gordon Research Conference, Gravitational Effects on Living Systems, Proctor Academy, Andover, NH. August 10-14, 1992.
- *"Lung Oxygen imaging with ^{19}F NMR"* – presented at the Workshop on Novel Approaches to Lung Imaging; National Heart, Lung and Blood Institute, NIH, September 24-25, 1991. Co-chairs: E. Hoffman, and J. Rodarte.
- *"Cardiovascular Responses to Environmental Extremes: Examples from Nature"* – University of Copenhagen, Denmark. 1989
- *"Vasodilator Responses in Coronary and Systemic Circulation"* – Danish Heart Association, Copenhagen, Denmark. 1989
- *"Magnetic Resonance Spectroscopy in Humans"* – Symposium Co-Chair and presenter for the American Physiological Society, Rochester, Minnesota. 1989
- *"Cardiac Contractility"* – introduction of Prof. Henk ter Koers presentation at the 31st International Congress of Physiological Sciences, Helsinki, Finland. 1989
- *"Cardiovascular Responses to Drugs Which Prevent Cellular Entry of Calcium"* – Department of Pharmacology, University of Montreal. 1988
- *"Perfluorocarbon Penetration and Detection in Ischemic Myocardium"* – Baxter Healthcare Corp., Illinois. 1988
- *"Protection of Ischemic and Reperfused Myocardium by Amlodipine"* – Norvasc Working Group, Paris. 1988
- *"Vertebrate Cardiovascular Adaptation to Adverse Environments"* – Department of Zoology, Miami University, Oxford, OH. 1987
- *"Coronary and Systemic Angiography in the Seal during Simulated Dives"* – Symposium on Diving and Hypometabolism, Cowichan Bay, Vancouver Island, Canada. 1987
- *"Vasodilators: Effects on Cardiac Output, Coronary and Mesenteric Circulations"* – University of Cincinnati, Department of Pharmacology and Cell Biophysics, Cincinnati, Ohio. 1984
- *"Beta Blocking and Calcium Blocking Drugs and Their Mechanisms of Action"* – Alpha Zeta Omega, Pharmaceutical Society, Jewish Hospital, Cincinnati, Ohio. 1984
- *"Calcium Antagonists: Heterogeneity of Action"* – American Heart Association, Annual Scientific Sessions, "Meet the Expert", Miami Beach, Florida. 1984
- *"The Physiological Basis of Diagnostic Imaging and Treatment of Cardiac Ischemia with Fluorocarbon Emulsions"* – AAAS, Detroit, Michigan. 1983
- *"Publication Fraud: Making Readers Aware"* – Medical Library Association, Cincinnati, Ohio, 1983
- *"Newer Vasodilators: Afterload Reduction and Coronary Dynamics"* – Cardiovascular Symposium for Nurses, Cincinnati, Ohio. 1983
- *"Why Does Coronary Flow Stop in the Diving Seal?"* – University of Cincinnati, Department of Internal Medicine, Division of Cardiology, Cincinnati, Ohio. 1983
- *"Calcium channel blocking drugs"* – Abbott Laboratories, North Chicago, Illinois. 1982
- *"Cardiovascular Physiology of Diving Mammals"* – University of Cincinnati, Department of Biological Sciences, Cincinnati, Ohio. 1982
- *"Cardiovascular Actions of Calcium Channel Blockers: An Overview"* – Federation of American Societies for Experimental Biology, Annual Meeting, New Orleans, Louisiana. 1982
- *"Relationships between Regional Myocardial Perfusion and Mechanics"* – The Ohio State University, Department of Physiology, Columbus, Ohio. 1981
- *"Animal Models of Cardiovascular Disease--The Planned and the Serendipitous"* – University of Missouri, College of Veterinary Medicine, Columbia, Missouri. 1981
- *"The Heart"* – Wayne State University, Principles and Practice of Industrial Toxicology Course, Detroit, Michigan. 1981
- *"Effects of Vasodilators during Experimental Cardiac Tamponade in Anesthetized Closed Chest Dogs"* – Annual Meeting, Ohio Genesee Valley Cardiology Group, Columbus, Ohio. 1981
- *"Cardiovascular Actions of Calcium Channel Blocking Drugs*" – University of Cincinnati, Department of Medicine, Cincinnati, Ohio. 1981
- Symposium on Cardiac Output in Exercise, FASEB, Anaheim, California. 1980
- Symposium on Coronary Circulation, Bad Nauheim, West Germany. 1980
- Symposium on Cardiovascular System Dynamics, Graz, Austria. 1980
- *"Coronary Collaterals and Cardiac Mechanics",* Heart Center, Munich, Germany. 1980
- *"Coronary Occlusion and Regional Myocardial Function"*, University of Iowa, Iowa City, Iowa. 1980

PUBLISHED ABSTRACTS

1. Angelakos, E.T., P.M. Glassman, R.W. Millard and M. King. The sympathetic neurohumor in the frog heart. Pharmacologist 6: 97, 1964.

2. Angelakos, E.T., M. King, P.M. Glassman and R.W. Millard. Sympathetic neurohumors in the heart. 23rd Int. Cong. of Physiol. Sci., Tokyo, Japan, 483, 1965.

3. Millard, R.W. and E.T. Angelakos. Positive chronotropic effects of dopamine. Physiologist 10: 251, 1967.

4. Millard, R.W. and K. Johansen. Active neurogenic vasodilation in skin. Physiologist 14: 195, 1971.

5. Johansen, K., R.W. Millard and W.K. Milsom. Control of web blood flow in the giant petrel, *Macronectes giganteus*. University of California, San Diego. Alpha Helix Research Program Report, 8, 1971.

6. Millard, R.W., K. Johansen and W.K. Milsom. Factors regulating blood flow in the penguin foot. University of California, San Diego. Alpha Helix Research Program Report, 11, 1971.

7. Milsom, W.K., R.W. Millard and K. Johansen. Postembryonic development of respiratory properties of blood in the penguin, *Pygoscelis adeliae*. University of California, San Diego. Alpha Helix Research Program Report, 13, 1971.

8. Vatner, S.F., C.B. Higgins, R.W. Millard, D. Franklin and E. Braunwald. Effect of circulatory derangements on the normal visceral response to severe exercise in untethered dogs. Clin. Res. 20: 162, 1972.

9. Higgins, C.B., S.F. Vatner, R.W. Millard, D. Franklin and E. Braunwald. Effect of tachycardia on left ventricular contractility in conscious dogs. Clin. Res. 20: 206 and 378, 1972.

10. Vatner, S.F., C.B. Higgins, R.W. Millard, D. Franklin and E. Braunwald. Blood flow distribution in experimental congestive heart failure in conscious dogs. Clin. Res. 20: 175, 1972.

11. Higgins, C.B., R.W. Millard, D. Franklin, E. Braunwald and S.F. Vatner. Regional hemodynamic effects of dopamine (3-OH tyramine) in the conscious dog. Fed. Proc. 31: 542, 1972.

12. Millard, R.W., C.B. Higgins, D. Franklin and S.F. Vatner. Effects of dopamine (3-hydroxy tyramine): Coronary vasoconstriction and parasympatholytic augmentation of inotropic and pressor actions in conscious dogs. Clin. Res. 20: 410, 1972.

13. Vatner, S.F., C.B. Higgins, R.W. Millard and D. Franklin. Norepinephrine induced coronary vasoconstriction in the conscious dog. Clin. Res. 20: 414, 1972.

14. Higgins, C.B., S.F. Vatner, R.W. Millard, D. Franklin and E. Braunwald. Alterations in regional hemodynamics in experimental heart failure in conscious dogs. Clin. Res. 20: 619, 1972.

15. Millard, R.W., B.C. Hodgkin and C.V. Nelson. Electrocardiographic changes at different cardiac volumes produced by tachycardia and acute hemorrhage. Physiologist 17: 289, 1974.

16. Bonner, R.A., R.W. Millard and E.T. Angelakos. Cardiorespiratory sequelae in a model of sudden infant death. Physiologist 17: 186, 1974.

17. Hodgkin, D.B., R.W. Millard and C.V. Nelson. Magnitude, direction, and location of the pig heart vector. Physiologist 17: 249, 1974.

18. Millard, R.W., G.R. Heyndrickx, P.R. Maroko and S.F. Vatner. Chronological adjustments of regional electrograms and contractility to transient myocardial ischemia and reperfusion in conscious dogs. Physiologist 18: 319, 1975.

19. Millard, R.W., S.F. Vatner and G.A. Bergeron. Dose and time dependent effects of nitroglycerin on blood flow distribution in conscious dogs. Clin. Res. 23: 568A, 1975.

20. Millard, R.W., H. Baig, T. Patrick, M. Davis and S. Vatner. Correlation of regional function and flow in ischemic myocardium of conscious dogs. Circulation (Supp. II) 51, 52: 127, 1975.

21. Manders, T., S. Vatner, R.W. Millard, G. Heyndrickx and P.R. Maroko. Altered relationship between creatinine phosphokinase release and infarct size with reperfusion in conscious dogs. Circulation (Supp. II) 51, 52: 5, 1975.

22. Heyndrickx, G., S. Vatner, R.W. Millard, T. Manders and P.R. Maroko. Effects of coronary artery reperfusion on myocardial mechanical and electrophysiological function in conscious dogs. Circulation (Supp. II) 51, 52: 21, 1975.

23. Boettcher, D., S. Vatner, G. Heyndrickx, R.W. Millard and E. Braunwald. Role of Frank-Starling mechanism in control of cardiac function in normal conscious dogs. Circulation (Supp. II) 51, 52: 42, 1975.

24. Vatner, S.F., M. Pagani, T. Manders and R.W. Millard. Paradoxical depression of both vasoconstriction and of baroreceptor reflex sensitivity in conscious neonatal lambs. Fed. Proc. 35: 636, 1976.

25. Vatner, S.F., R.J. McRitchie and R.W. Millard. Reflex circulatory control in response to hemorrhage in conscious dogs. Physiologist 19: 400, 1976.

26. Millard, R.W., H. Baig, M. Pagani and S.F. Vatner. Delayed renal vasoconstriction during acute hypoxemia in fetal sheep in utero. Physiologist 19: 297, 1976.

27. Millard, R.W., R.J. Capone and A.S. Most. Degree of myocardial ischemia as a determinant of blood flow restoration. Clin. Res. 24: 617A, 1976.

28. Millard, R.W., R.J. Capone and A.S. Most. Persistent paradoxical motion despite revascularization of ischemic myocardium. Fed. Proc. 36: 520, 1977.

29. Millard, R.W., H. Baig and S.F. Vatner. Renal vascular protection by prostaglandins during hypoxemia in unanesthetized fetal lamb. Ped. Res. 11: 395, 1977.

30. Millard, R.W. and A.S. Most. A paradox between regional myocardial function and blood flow after coronary occlusion in conscious swine. 27th Int. Cong. Physiol. Sci., Paris, France, 1977.

31. Williams, D.O., R.W. Millard and A.S. Most. Differential effect of nitroglycerin on normal and low flow zones in the chronically ischemic heart. Circulation (Supp. III) 55,56: 110-111, 1977.

32. Millard, R.W. Absence of compensatory contractility augmentation of normal myocardium during onset of acute regional ischemia in conscious pigs. Physiologist 21: 80, 1978.

33. Meyers, R.W., R. Moalli, D.C. Jackson and R.W. Millard. Microsphere studies of central vascular shunts and regional skin flows in the bullfrog. Physiologist 21: 79, 1978.

34. Moalli, R., R.S. Meyers, D.C. Jackson and R.W. Millard. Functional mapping of arterial supplies to the skin of anuran amphibia. Physiologist 21: 81, 1978.

35. Adolph, R.J., H. Nishiyama, D. Franklin, R.W. Millard and M. Gabel. Correlative studies of effects of perfusion and ischemia on Thallium-201 uptake. Am. J. Cardiol. 43: 357, 1979.

36. Rouslin, W., J. MacGee, J.E. Pucke, T. Wang, K. Imai, A.O. Gende, R.W. Millard, T. Nagao and A. Schwartz. Ischemia-induced changes in canine cardiac sarcoplasmic reticulum membrane cholesterol and fatty acids. Fed. Proc. 38: 338, 1979.

37. Boyle, R., B. Stonestreet, R. Millard and W. Oh. Hemodynamic effects of indomethacin in preterm lambs with respiratory distress and patent ductus arteriosus. Ped. Res. 13: 341, 1979.

38. Nagao, T., R.W. Millard, A. Schwartz and D. Franklin. Augmented ischemic myocardial function by recruitment of collateral flow reserve with diltiazem, a calcium antagonist. Circulation (Supp. II) 59, 60: 260, 1979.

39. Rouslin, W., R.W. Millard and A. Schwartz. Porcine myocardial ischemia. Defect in mitochondrial electron transfer complex I. Circulation (Supp. II) 59, 60: 116, 1979.

40. Fuller, E.O., P.M. Galletti, D.O. Nutter and R.W. Millard. Hemodynamics of the perfused pregnant sheep uterus. Am. J. Obstet. Gynecol., 1979.

41. Rouslin, W., J.E. Pucke, R.W. Millard, T. Nagao and A. Schwartz. The effect of ischemia on canine cardiac mitochondrial ATPase and enzymes of electron transport. Proc. Int. Cong. Biochem., 1979.

42. Ashraf, M., G. Asano, R. Millard, M.A. Matlib, J. Greenfield and A. Schwartz. Ultrastructural determinants of myocardial cell degeneration in hypertrophied dog myocardium. Lab. Invest. 42: 99, 1980.

43. Grupp, I., G. Grupp, N.O. Fowler, M. Gabel, A.A. Alousi and R.W. Millard. Hemodynamic and inotropic responses of normal and depressed dog hearts to amrinone. Fed. Proc. 39: 976, 1980.

44. Millard, R.W., J. Kjekshus, A.S. Blix, D. Franklin and R. Elsner. Coronary vasoconstriction in diving seals: A natural model of vasospasm. Fed. Proc. 39: 398, 1980.

45. Matlib, M., J. Rembert, R. Millard, M. Ashraf, T. Nagao, W. Rouslin, G. Asano, J. Greenfield and A. Schwartz. Mitochondrial function in canine experimental cardiac hypertrophy. Fed. Proc. 39: 633, 1980.

46. Kjekshus, J., R.W. Millard, A.S. Blix, D. Franklin and R. Elsner. A natural model of coronary vasospasm: The diving seal. Eur. Cong. Cardiol., 1980.

47. Millard, R.W. and R. Smith. Collaterals supply viable but hypofunctional myocardium in pig with chronic coronary stenosis. 28th Int. Cong. Physiol. Sci., 1980.

48. Grupp, G., I.L. Grupp, R.W. Millard, N.O. Fowler and A. Schwartz. Effects of the inotropic agent amrinone on hemodynamics of normal and depressed hearts. 28th Int. Cong. Physiol. Sci., 1980.

49. Franklin, D., R.W. Millard and T. Nagao. Effect of calcium antagonist on flow and function in collateral dependent myocardium in the conscious dog with simulated angina pectoris. 28th Int. Cong. Physiol. Sci., 1980.

50. Elsner, R., R. Millard, J. Kjekshus, A. Blix, R. Hol, D. Franklin and L. Sordahl. Cardiac adaptations in diving seals. 28th Int. Cong. Physiol. Sci., 1980.

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Invited Editorials

1. **Millard, R.W.** and A. Schwartz. Beta blockade and calcium channel blockers. *Circulation* 66: 902, 1982.

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Letters to Editors

1. **Millard, R.W.** and A. Schwartz. CV response to calcium-entry blocking drugs. *Circulation* 66:902, 1982

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Book Chapters

1. Schwartz, A., G. Grupp, **R.W. Millard**, I. Grupp, D.A. Lathrop, M.A. Matlib, P.L. Vaghy and J.R. Valle. Calcium channel blocking agents: Possible mechanisms of protective effects on the ischemic myocardium. In, Calcium Antagonists, American Physiological Society, 1981, pp. 191-210.

2. **Millard, R.W.** and D. Franklin. Relationships between collateral blood flow and myocardial mechanics in dogs and pigs. In, Cardiovascular System Dynamics: Models and Measurements (T. Kenner, R. Busse, H. Hinghofer, eds.), New York: Plenum Press, 1982, pp. 263-268.

3. **Millard, R.W.** Cardiac and vascular measurements in conscious and anesthetized animals. In, Methods in Pharmacology, Vol. 5 (A. Schwartz, ed.), New York: Plenum Publishing Co., 1984, Chapter 12, pp. 167-174.

4. Clark, Jr., L.C., J.L. Ackerman, S.R. Thomas, **R.W. Millard**, R.E. Hoffman, R.G. Pratt, H. Ragle-Cole, R.A. Kinsey, and R. Janakiraman. "Perfluorinated Organic Liquids and Emulsions as Biocompatible NMR Imaging Agents for 19F and Dissolved Oxygen" in Advances in Experimental Medicine and Biology. Edited by D. Bruley, H.I. Bicher, and D. Reneau. Plenum Publishing Corporation, New York, New York; 180: 835-845, 1985.

5. Hargens, A.R., **R.W. Millard**, K. Pettersson, W. vanHoven, D. Gershuni, and K. Johansen. Transcapillary fluid balance in giraffe. Advances in Microcirculation Vol. 13 (N. Staub, ed.), Karger, Basel, 1987, pp. 195-202.

6. Rigel, D.F., and **R.W. Millard**. A conundrum with reciprocal cardiorespiratory variables: Illustration by differential baroreflex control of heart period and heart rate in selected vertebrates. Physiological Adaptations in Vertebrates: Respiration Circulation and Metabolism, Chapter 10, pp. 201-212, 1992, Marcel Dekker, Inc., N.Y. Editors: S.C. Wood, A.R. Hargens, R.W. Millard, R.E. Weber.

7. Elsner, R., M.B. Daly, A. Maseri, **R.W. Millard**, and F.C. White. Coronary circulation in seals. Physiological Adaptations in Vertebrates: Respiration Circulation and Metabolism, Chapter 20, pp. 363-375, 1992, Marcel Dekker, Inc., N.Y. Editors: S.C. Wood, A.R. Hargens, **R.W. Millard**, R.W. Weber.

8. Gerson, M.C., A. McGoron, N. Roszell, D. Biniakiewicz, and **R.W. Millard**. Radio-pharmaceuticals and tracer kinetics. In, Cardiac Nuclear Medicine, 3rd Edition, Gerson MC (Editor), McGraw-Hill (Publisher), Chapter 1, pp. 3-28, 1997.

9. Banerjee, R. K., A. Sinha Roy, L.H. Back, S. Khoury, and **R.W. Millard.** Coronary angioplasty and guidewire diagnostics. In, Wiley Encyclopedia of Medical Devices and Instrumentation; ed. J.G. Webster, University of Wisconsin, John Wiley & Sons (2005)

10. Hargens, A.R., K. Petterson, and **R.W. Millard**. Giraffe Cardiovascular Adaptations to Gravity in Endothelial Biomedicine, Aird W.C, Ed., Cambridge: Cambridge University Press, 2007; p 99-106 (ISBN-13: 9780521853767).

11. Xu, M., **R.W. Millard**, and M Ashraf. Role of GATA-4 in Differentiation and Survival of Bone Marrow Mesenchymal Stem Cells, (25 pages, 135 references) in Genetics of Stem Cells, Tang, Y, Ed., Elsevier (2012), in series entitled Progress in Molecular Biology and Translational Science, 111 217-41 DOI: 10.1016/B978-0-12-398459-3.00010-1, edited as a whole by P. Michael Conn.

Co-Editor – Books

1. Physiological Adaptations in Vertebrates: Respiration Circulation and Metabolism, Chapter 20, pp. 363-375, 1992, Marcel Dekker, Inc., N.Y. Editors: S.C. Wood, A.R. Hargens, **R.W. Millard**, R.W. Weber.

Videotapes/Audio Files/Television Programs/Continuing Ed Courses/Releases/Photo Credits

1. "*Environmental Education for Primary and Secondary School Educators*", a 3 credit course, summer, 1970. University of Washington, Seattle, Continuing Education Division, 100 enrollees; course organizer and coordinator, **R.W. Millard**. University of Washington Public Educational Television; 30 minute program; highlights of the course with selected participants, 1970.

2. "*Non-invasive measurement of heart blood volume and other current heart research topics*" for Heart Research in Maine; on Maine Public Television, Portland Maine; **R.W. Millard**, guest, 30 min program, 1974.

3. "*Just around the corner: A 21st century physician.*" Education Television Services, University of Cincinnati Medical Center. **R.W. Millard** cast in lead role as physician of 21st century, 1987.

4. Kleene, S. "*The diving seal.*" Sea Frontiers, Nov.-Dec. 1989, 370-374, photo p. 371, Weddell seal by **R.W. Millard**.

4. Kleene, S. "*Off the deep end.*" Discovery, Fall, 1990, the University of Cincinnati Medical Center Press, 19-23, photo p. 21, Weddell seal with Adelie penguins by **R.W. Millard**.

6. "*Cardiovascular studies and hypertension: What can the giraffe tell us?*" a health news segment released to 100 U.S. television markets in North America by Ivanhoe Productions, Orlando, FL. **R.W. Millard** taped during interview at Cincinnati Zoo, 1993.

7. News Article: Darwin Sesquicentennial at UC: '*Darwin 2009 — Evolution: Evidence and Impact Capstone Symposium — 'The Vision and Legacy of Charles Darwin'*. National Geographic contributing writer David Quammen, Darwin-Wallace Medal Recipient Mohamed Noor, "Ardi" team member Owen Lovejoy to be among speakers at Nov. 23, 2009 symposium organized for the University of Cincinnati by **Dr. Ronald W. Millard**, Professor, Pharmacology and Cell Biophysics, College of Medicine. http://www.uc.edu/news/NR.aspx?id=10970

8. Radio Interview: Field Notes: The Origin of Species *by Thane Maynard (CEO, Cincinnati Zoo and Botanical Garden)*

Thane Maynard's Field Notes welcomes **Dr. Ronald Millard** from U.C.'s College of Medicine and Cell Biophysics to discuss the university's year-long celebration of the birth of Charles Darwin and the publication of *The Origin of Species* and the contemporary applications of his theories.
http://198.234.121.108/cincinnatiedition/091408_FieldNotes.mp3

Listen to the MP3

9. Interview in Second Life: "*Virtual Galapagos Islands in Second Life*" 30 minute interview by *Cyberrgirl Oh* on REAL BIZ in Second Life, a SLCN.tv show entirely filmed in Second Life (machinima). REAL BIZ offers a different real world company every Monday at 5pm eastern time, US. **R.W. Millard** and Christina Collins, co-creators of the Galapagos Project as part of the 2009 Darwin Sesquicentennial Program at the University of Cincinnati, are interviewed live within the Galapagos Island Project on the University of Cincinnati's village on Second Life. November 17, 2008 Project preview can be seen at: http://slcn.tv/node/2355

10. Radio Interview: Field Notes: Giraffe Biology *by Thane Maynard (CEO, Cincinnati Zoo and Botanical Garden)* Cincinnati Edition, WVXU Radio, 91.7FM, broadcast on Sunday January 20, 2013 (10.5 minutes). For all the giraffe lovers out there, you'll enjoy Thane Maynard's Field Notes welcomes **Dr. Ron Millard** from U.C.'s Department of Pharmacology & Cell Biophysics in the Medical School to discuss the circulation and physiology of animals, including the challenge of determining the circulation and blood pressure in giraffes. http://wvxu.org/post/ucs-dr-ron-millard