

## **M. LUISA IRUELA-ARISPE**

Professor and Vice-Chair  
Department of Molecular, Cell and Developmental Biology  
Director for the Molecular Biology Institute  
Chair of the Interdisciplinary Molecular Biology Graduate Program  
Director of Cancer Cell Biology Program Area, JCCC Cancer Center  
University of California, Los Angeles  
[arispe@mcdb.ucla.edu](mailto:arispe@mcdb.ucla.edu)

### ***Curriculum vitae***

#### **A-GENERAL INFORMATION**

##### **PERSONAL:**

Business Address: UCLA Terasaki Life Sciences Building  
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Citizenship: USA and Spain

##### **EDUCATION:**

1983 BS., Biology, Universidade Gama Filho, Rio de Janeiro, Brazil.

1986 MS., Department of Histology and Embryology, Universidade Federal de Rio de Janeiro, Brazil.

1989 Ph.D., Department of Histology, Universidade de São Paulo, Brazil, and Dept. of Biological Structure, University of Washington, Seattle, WA.  
Thesis Advisor: E. Helene Sage

##### **POSTDOCTORAL TRAINING:**

1989-1993 Postdoctoral Fellow, Department of Biological Structure, University of Washington  
Advisors: Dr. Helene Sage and Dr. Paul Bornstein.

##### **PREVIOUS POSITIONS:**

1994-1998 Assistant Professor, Department of Pathology, Harvard Medical School and Beth Israel-Deaconess Medical Center, Boston, MA

1998-2000 Assistant Professor, Department of Molecular, Cell, and Developmental Biology, UCLA, Los Angeles, CA

1999-2003 Associate Professor with Tenure, Department of Molecular, Cell, and Developmental Biology, UCLA, Los Angeles, CA

2003-2011 Full Professor with Tenure, Department of Molecular, Cell, and Developmental Biology, UCLA, Los Angeles, CA

2005-2006 Associate Director of Cancer Cell Biology Program, Jonsson Comprehensive Cancer Center, UCLA

2011-2014 Interim Director, Molecular Biology Institute, UCLA, Los Angeles, CA

2014- Director, Molecular Biology Institute, UCLA, Los Angeles, CA

## PRESENT POSITIONS:

- 2011-present Distinguished Professor, Department of Molecular, Cell, and Developmental Biology, UCLA, Los Angeles, CA
- 2004-present Vice-Chair, Department of Molecular, Cell and Developmental Biology, UCLA
- 2008-present Full Professor Orthopaedic Surgery
- 2006-present Director of Cancer Stem Cell Biology Program Area, Jonsson Comprehensive Cancer Center, UCLA
- 2011-present Chair, Molecular Biology Interdepartmental Graduate Program, Molecular Biology Institute, UCLA, Los Angeles, CA
- 2014-present Director, Molecular Biology Institute, UCLA, Los Angeles, CA

## SCIENTIFIC SABBATICAL:

- 2012-2013 Sabbatical year at EPFL, Laboratories of Dr. Doug Hanahan and Dr. Miki De Palma

## AWARDS:

- Stop Cancer Next Generation Awardee, 1999
- Drake Scholar Awardee, 1999
- American Heart Association Established Investigator, 1999-2004.
- Margaret E. Early Awardee, 1999-2001
- UCLA - Dean's Marshall Awardee, 2000
- Wiederhielm Award for 2002 (given by the Microcirculatory Society for the most cited paper (2002) in that field)
- Judith Lengyel Award in 2005 for excellence in research, teaching and service at UCLA
- Distinguished Teaching Award in 2009 for excellence in teaching at UCLA (6 awards are given campus-wide with 4,000 tenured faculty members)
- Undergraduate Mentorship Award in 2009 for excellence in mentorship at UCLA (1 award is given campus-wide with 4,000 tenured faculty members)
- The 2009 Judah Folkman Award (first recipient), given annually by NAVBO, for excellence in research and service to the vascular biology community
- Citation for Distinguished Service as a member of the Editorial Board of American Journal of Physiology for 2011 & 2012 – Heart & Circulatory Physiology
- 2013 UCLA Gold Shield Faculty Prize – awarded annually to a full professor in mid-academic career in recognition of extraordinary accomplishment in undergraduate teaching, research and creative activity, and service to UCLA.
- 2014 Mentor Award, given to a single member of the faculty by the Society of Postdoctoral Scholars Mentoring Award 2014 at UCLA

## FIVE MOST SIGNIFICANT PUBLICATIONS:

1. Goddard, L.M., Murphy, J.T., Org, T., Enciso, J.M., Hashimoto-Partyka, M.K., Warren, C.M., Domigan, C.K., McDonald, A., He, H., Sanchez, L.A., Allen, N.C., Orsenigo, F., Chao, L.C., Dejana, E., Tontonoz, P., Mikkola H.K.A., **Iruela-Arispe, M.L.** 2014. Progesterone receptor in the vascular endothelium triggers physiological uterine permeability preimplantation. *Cell*, 156(3);549-62. PMID: PMC3985399.
2. Zovein AC, Luque A, Turlo KA, Hofmann JJ, Yee KM, Becker MS, Fassler R, Mellman I, Lane TF, **Iruela-Arispe, M.L.** 2010. Beta1 integrin establishes endothelial cell polarity and arteriolar lumen formation via a Par3-dependent mechanism. *Dev Cell*. 18(1):39-51. (*Highlighted by Faculty of 1000*). PMID3178410.

3. Zovein, A.C., Hofmann, J.J., Lynch, M., French, W.J., Turlo, K.A., Yang, Y., Becher, M.S., Zanetta, L., Dejana, E., Gasson, J., Tallquist, M.D., and **Iruela-Arispe, M.L.** 2008. Fate tracing reveals the endothelial origin of hematopoietic stem cells. *Cell Stem Cell* 3(6):625-636. **(Cover)** (Highlighted by Faculty of 1000; Selected by Science Editor's Choice, Highlighted by Nature Reviews, also Top10 most downloaded paper for 2008 in Dev. Cell). PMC2631552
4. Lee, S., Chen, T.T., Barber, C.L., Jordan, M.C., Murdock, J., Desai, S., Ferrara, N., Nagy, A., Roos, K.P., **Iruela-Arispe, M.L.** 2007. Autocrine VEGF signaling is required for vascular homeostasis. *Cell*, 130:691-703. (Highlighted in the Cell issue and by Nature Reviews 7:475 Recommended as must read by Faculty of 1000). PMC3010851
5. Lee, S., Jilani, S.M. Nikolova, G.V., Carpizo, D., and **Iruela-Arispe, M.L.** 2005. Processing of VEGF-A by matrix metalloproteinases regulates bioavailability and vascular patterning in tumors. *J. Cell Biol.* 169(4):681-691. **(Cover)** (Highlighted in the JCB issue and by Nature Reviews 5:500-501, also Top 10 most cited paper that year in JCB). PMC2171712

## **B-ACADEMIC SERVICE**

### **TEACHING:**

#### **Graduate Teaching:**

##### At Harvard Medical School (for medical students)

- Genetics, Embryology and Reproduction (4 lectures) – 1997
- Genetics, Embryology and Reproduction (6 lectures) – 1998
- Pathology (discussion of pathology cases) – 1996 and 1997

##### At UCLA (for graduate students)

- Molecular Mechanisms of Blood Vessel Function and Therapeutic Intervention in Cancer (MBI-297, seminar course) – 10 weeks, Enrollment-18 students – Spring 1999.
- Assessment of Gene Function Using Mouse Models (MBI-298, seminar course)-10weeks, Enrollment-18 students – Winter 2000.
- Molecular Genetics of Development (MCDB-278) – subtitled: Molecular/Cellular Basis of Organogenesis (seminar course) – 10 weeks, Enrollment-16 students – Fall 2001
- Tyrosine Kinases in Physiology and Disease (MBI-297) -10weeks, Enrollment-18 students – Fall 2001.
- Cell Biology (M267) – 5 lectures, Enrollment- 76 students – Winter 2002
- Tyrosine Kinases in Physiology and Disease (MBI-297) –10 weeks, Enrollment- 27 students – Fall 2002.
- Cell Biology (M267) – 5 lectures, Enrollment- 60 students – Winter 2003
- Cell Biology (M267) – 6 lectures, Enrollment- 67 students – Winter 2004
- Course Coordinator and Lecturer: Cell Biology (M267A) – 7 lectures, Enrollment 72 students – Winter 2005
- Course Coordinator and Lecturer: Vascular Biology (MCDB224) – 4 lectures, Enrollment 25 students – Winter 2005
- Signaling Mechanisms in Developmental Processes (MBI-298, seminar course)-10weeks, Enrollment-18 students – Spring 2005.
- Course Coordinator and Lecturer: Cell Biology (M267) – 7 lectures, Enrollment-121 students – Winter 2006
- Course Coordinator and Lecturer: Cell Biology (M267) – 7 lectures, Enrollment- 64 students – Winter 2007
- Stem Cell Biology and Regenerative Medicine (M272) – 2 lectures, Enrollment – 22 students – Spring 2007
- Course Coordinator and Lecturer: Cell Biology (M267) – 5 lectures, Enrollment- 83 students – Winter 2008
- Stem Cell Biology and Regenerative Medicine (M272) – 2 lectures, Enrollment – 18 students – Spring 2008
- Course Coordinator and Lecturer: Cell Biology (M267) – 5 lectures, Enrollment- 74 students – Winter 2009
- Stem Cell Biology and Regenerative Medicine (M272) – 2 lectures, Enrollment – 23 students – Spring 2009
- Course Coordinator and Lecturer: Vascular Biology (MCDB224) – 3 lectures, Enrollment 18 students – Spring 2010
- Course Coordinator and Lecturer: Vascular Biology (MCDB224) – 6 lectures, Enrollment 16 students – Spring 2012
- Course Coordinator and Lecturer: Vascular Biology (MCDB224) – 3 lectures, Enrollment 14 students – Spring 2014

- Course Coordinator and Lecturer: Scientific Writing Course (MCDB 255) – Fall 2014

### Undergraduate Teaching:

#### At UCLA

- Introduction to Cell Biology (MCDB-100) –20 lectures, Enrollment-132 students – Fall1999
- Biology of the Cell (MCDB-165) –16 lectures, Enrollment- 65 students – Winter 2001
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-135 students –Fall 2001
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-140 students –Fall 2002
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-155 students –Fall 2003
- Current topics in MCDB (MCDB 197) –10 lectures, Enrollment- 10 students – Winter 2004
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-165 students –Fall 2004
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-181 students –Fall 2005
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-121 students –Fall 2006
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-135 students –Fall 2007
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-151 students –Fall 2008
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-147 students –Fall 2009
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-132 students –Fall 2010
- Biology of the Cell (MCDB-165) –20 lectures, Enrollment-177 students –Fall 2011
- Biology of the Cell (MCDB-165) – 20 lectures, Enrollment-125 Students –Fall 2013
- Biology of the Cell (MCDB-165) – 20 lectures, Enrollment-147 Students – Fall 2014
- Biology of the Cell (MCDB-165) – 20 lectures, Enrollment-TBD Students – Fall 2015

### TRAINING

#### Former Graduate Students:

	<u>Dates in Training</u>	<u>Current Position</u>
Francisca Vazquez	1995-1998	Instructor, Dana Farber Institute
Shelley Thai	1998-2004	Associate Professor, Biology Dept., Glendale Community College, CA
Thomas Murphy	1999-2003	Scientist, Pfizer
Nathan Lee	1999-2004	Scientist, Novartis
Darren Carpizo	1999-2003	Asst Prof of Surgery, Rutgers Cancer Inst. of New Jersey
Jackelyn Alva	2000-2005	Research Scientist, UCLA
Chad Barber	2003-2008	Asst. Prof., Calif. Lutheran University
Tom Chen	2004-2010	Postdoc Fellow, Genentech
Jennifer Hofmann	2004-2009	Postdoc Fellow, Karolinska Inst.
Ricardo Hernandez Garcia (Int'l Scholar June-Dec 2010)		Student, Cinestav/Pharmac. ,Mexico
Kirsten Turlo	2005-2011	Instructor, UCLA
Lauren Goddard	2007-2013	Postdoc Fellow, Univ. of Penn.
Huanhuan He	2010-2013	Postdoc Fellow, Stanford University
Courtney Domigan	2007-2014	Associate, Deallus Consulting
Onika Noel	2010-2014	4 <sup>th</sup> Year Med. School, Ph.D., UCLA
Taylor Lu	2013-2014	Medical Student IV, Duke University
Safiyyah Ziyad	2010-2015	Postdoc Fellow, UCLA

#### Former Master Students:

Shahla Jilani	2000-2002	M.D., Unity Health Care, Wash DC
Lauren Sanchez	2005-2008	Resident

#### Former Ph.D. Post-Doctoral Fellows:

Jose Luis Alonso	1994-1996	Instructor, Medicine/Assistant in Biology, Mass. Gen'l Hospital
Sang Hoon Lee	1994-1997	Head-Bio Div., Hanwha Chem., Korea

Maria A. Ortega	1994-1998	Scientist, Applied Biosyst, Spain
Juan Carlos Rodriguez-Manzaneque	1997-2002	Group Leader en GENYO, Spain
Karol Watson	1998-2000	Assoc Prof, UCLA Dept. Medicine
Alfonso Luque	2000-2005	Princ. Invest., CNIC, Spain
Sunyoung Lee	2001-2008	Adjunct Prof., Burnham Institute
Arnaud Monvoisin	2002-2005	Asst Prof., Univ. de Poitier
Nathan Lee	2004-2006	Principal Scientist, Pfizer Inc.
Antonio Torres-Collado	2010-2013	Scientific Advisor, GOC Networking
Carmen Warren	2008-2014	Scientist, Agensys, Inc.

**Former M.D. Post-doctoral Fellows:**

Michael Graubert	1995-1997	Director, Palmetto Fertility Ctr., Miami
Ann Zovein	2003-2010	Assistant Professor, UCSF
Andrea Monte Alto Costa	2010-2011	Assoc. Prof., Rio de Janeiro State Univ.
Aditya Shirali	2015-	Research Fellowship

**Medical Students: (1 year)**

1994-1995: Thao Truong, Harvard Medical School  
1997-1998: Robert Ruelaz, Harvard Medical School  
1997-1998: Steve Russo, Harvard School of Dentistry  
2013-2014: Taylor Hu, Duke Univ. (Sarnoff Research Fellow)

**Undergraduate Students (who performed 190A, 190B and honors research):**

2000-2001: Karen Cheng, Ganka Nikolova  
2000-2002: Minh-ha Do, Nick Hamilton  
2001-2003: Anthony Salazar, Randy Dalugdugan  
2002-2003: Shirley Siao, Randy Dalugdugan  
2003-2004: Erin Yokoyama, Nita Nayac, Jessie Porter, Randy Dalugdugan  
2004-2005: Megana Krishna Prasad, Nancy Allen  
2005-2008: Lauren Sanchez  
2006-2007: Analila Valencia, Ali Naqvi  
2007-2008: Stephanie Lauw, Huilin Koh, Kevin Chen, Michael Safaee, Analila Valencia  
2008-2009: Jim Garritano, Marie LaRussa, Sravya Keremane, Ajayram Ullal, Xi Xue  
2008-2010: D’Juan Farmer, Ryan Ponec, Aaron Der, Roshni Vora, Jason Scapa  
2009-2010: Sanaz Bhafouri, Parnian Paymoud-Yazdi, Jason Scapa  
2009-2011: Amy Ton, Howard Lo  
2010-2011: Yilan Shi, Michael Daniel, Amy Ton,  
2011-2012: Amy Ton, Michael Daniel, Maryanne Ibrahim, Ryan Freshman, Jake Lichterman  
2012-2013: Kristine Huynh, Michael Rale, Ryan Freshman, Vaspour Antanesian, Helen Yu  
2013-2014: Kristine Huynh, Michael Rale, Ryan Freshman, Vaspour Antanesian, Helen Yu, Tiffany Lim, Grace Karen Hoi  
2014-2015: Helen Yu, Tiffany Lim, Karen Kam Hoi, Dana Song, Victoria Lee, Jonathan Freshman John O’Fee, Dai Phuong Nguyen, Will Jones  
2015-2016: Tiffany Lim, Karen Kam Hoi, Victoria Lee, Jonathan Freshman, John O’Fee, Dai Phuong Nguyen, Will Jones

**Rotating graduate students at UCLA (1 quarter):**

1998: Shelley Thai, Thomas Murphy  
1999: Huei-Yu Wang, Allison Barnes, Nathan Lee, Eda Yildirim  
2000: Kristie Nybo, Jackelyn Alva, Byeong Yoon  
2001: Melissa Comiso, Andra Dumitrescu  
2003: Esra Cagavi, Jeremy Burton, Chad Barber, Naureen Quibria, Dee  
2004: Tom Chen, Alexander Garcia, Ruchi Shrivastava, Jennifer Hofmann  
2005: Kirsten Turlo, Amir Ghaffari (MSTP)  
2006: Lucas Retespo, Ayca Erbilgin  
2007: Faith Lauren Hall-Glenn, Erin Noel Kirkbride

2008: Michelle Dragojlovic, Kristine Estrada, Courtney Domigan; William Wooten; Lauren Goddard,  
2009: Elena Bibikova, Nicole Marie Wheatley, Hoangkim Nguyen, Jeanette Grant, Jia Liu  
2010: Onika Noel (MSTP), Safiyyah Ziyad, Maia Boudzinskaia, Joseph H. Calvopina, Danny El-Nachef  
2011: Marcus Ruscetti, Austin McDonald  
2012: Dan Duan  
2013: Wenting Tsai, Shi-an (Skott) Chen  
2014: Giovanni Acosta, Norman Franklin Truong, Aaron van Loon

## **PARTICIPATION IN COMMITTEES:**

### **Recruitment Committees-UCLA**

- Graduate Recruitment Committee for the Department of Molecular Cell and Developmental Biology, Member, 1998-2004.
- ACCESS Recruitment Committee, Member, 1999-2004.
- MD/PhD Graduate Program Recruitment Committee (UCLA MSTP Program), Member 2001-2011.
- Faculty Search Committee for the Department of Molecular, Cell and Developmental & Biology, Member, 1998, 1999, 2000, 2002, 2004, 2007, 2008, 2009, 2012
- Chair, Faculty Search Committee for the Department of Molecular, Cell and Developmental & Biology, 2005, 2006.
- Search Committee for Chairman of Department of Microbiology and Molecular Genetics. Member 2001-2002.
- Search Committee for the Dean of the College of Letters and Sciences, UCLA. Member 2002-2004
- Chair, Academic Administrator Search Committee for the Department of Molecular, Cell & Developmental Biology, 2006.
- Chair, MARC Director and Tenure Professor Search Committee for the Division of Life Sciences, 2006.
- Search Committee for Executive Vice-Chancellor, UCLA. Member 2008
- Search Committee for Dean of Life Sciences, UCLA. Member 2008.
- Search Committee for Vice-Chancellor for Research, UCLA. Member, 2009.
- Evaluation Committee for Dean, School of Dentistry (No Hee Park), Member 2011

### **Graduate Committees**

- Preliminary Qualifying Exam for the Graduate student: Nancy Kaufman, Harvard Medical School, BBS program, March 1997.
- Interdepartmental Degree Program in Molecular Biology, Member, 2000-2001.
- Graduate Advisory Committee for the Department of Molecular, Cell and Developmental Biology, member, 1998-present.
- Advisory Committee for Reorganization of the ACCESS Curriculum, member, 2003.
- Oral Examination Committee and Thesis Defense for the following students (past): Francesca Vazquez, Shelley Thai, Ryan Bradley Green, Sarah Yohannan, Brian Kawasaki, James Tomlinson, Ting Chang, Jiong Chen, Nathan Lee, Thomas Murphy, Darren Carpizo, Hwei-Yu Wang, Allison Barnes, Jesus Araujo, Byeong Seob Yoon, Seung-Hye Jung, Eda Yildirim, Jackie Alva, Melissa Jane Comiso, Kristie Nybo, Joanne Marie Bliss, Rebecca Hummasti, Sarah Villa Dolan, Chad Lindsey Barber, Gary Potikyan, Saunders Tzu-Hsien Ching, Esra Casgavi, Francisco J. Maldonado-Arocho, Meredith Oltmann, Maskit Maymon, Samantha Olsen, Joseph Lasky, James Tomlinson, Tom Chen, Jennifer Hofmann, Michael Weinstein, Beth Rose, Sean Matthew Anderson, Ben Van Handel, Bettina Hajagos, Shivani Singh, Chris Crowley, Kirsten Turlo, Laurence Meloty-Kapella, Akanksha Chhabra, David Chan, Lauren Goddard, Huanhuan He, Courtney Domigan, Onika Noel, Lydia Lee, Ann Cavanaugh, Diana Moughon, Safiyyah Ziyad
- Oral Examination Committee and Thesis Defense for the following students (current): Chaitra Madhav Marathe, Tzu-Hsuan Huang, Sepideh Afshar, Safiyyah Ziyad, Andrew Brumm, Abigail Krall, Yasmin Ghochani, Jeff McCormick, Dan Duan, Diana Rigueur, Jessica Sea, Lydia Kyung-Min Lee, Ting Liu, Pop Wongpalee, Ha Neul (Skott) Lee, Navjot Kaur Gill
- Tumor Cell Biology and Signal Transduction Inter-Departmental Program – Chair, 2003-2004
- Biosciences Graduate Committee – Co-chair, 2011-2012 (Co-chair, Kelsey Martin)

### **International Graduate Committees**

- Opponent for Thesis Defense of Linda, Karolinska Institute, Stockholm, Sweden, February 2006.
- Member of Thesis Committee, Florian Milde, Zurich University, Switzerland, March, 2012

- Member of Thesis Committee, Jeanine Roodhart, Utrecht Medical Institute, The Netherlands, April 2012.

#### **Undergraduate Committees**

- Dean's prize selection Committee for undergraduate awards – 2002, 2003, 2008, 2009, 2010, 2011
- CARE Faculty Committee, Member, 2004-present
- PREP Selection and Faculty Committee, Member 2004-present
- Beckman Fellowship Selection Committee, Chair 2011-present

#### **Molecular Biology Institute Committees**

- Molecular Biology Institute Council, Member, 2002-2004
- Space Committee, Member, 2002-2003

#### **Academic Senate-UCLA**

- Council on Research (COR), Member, 2001-2002.
- Council on Research (COR), Vice-Chair, 2002-2003
- Council on Research (COR), Chair, 2003-2004
- Independent Substantive Review Committee (ISRC), Member, 2002-2005
- Consultation Committee to the Office for Intellectual Property, Member, 2006

#### **Training Grants**

- Director and Founder: Vascular Biology Training Grant, NIH/NHLBI, 2002-2012 (5 pre-doc + 3 post-doct. positions)
- Director and Founder: Vascular Biology Training Grant, NIH/NHLBI, 2012-2017 (7-pre-doc + 3 post-doct. positions)
- Member of the Faculty of the following training programs: Tumor Biology, Cell and Molecular Biology, Pharmacology, Pulmonary Biology, Cardiology, Molecular Pharmacology, Genetics.

#### **Research**

- Research Theme Task Force, Member, David Geffen School of Medicine, UCLA, 2013-2014
- Office of Intellectual Property and Industry Sponsored Research Board of Directors Nominations Review and Advisory Committee, Member, UCLA 2013-2014

### **C-OTHER ACTIVITIES**

#### **PRESIDENT:**

NAVBO (North American Vascular Biology Organization), 2006-2007 (A society that represents vascular biologists in the US and Canada, with 852 members). Also served in the NAVBO council as President-elect in 2005-2006 and Past president in 2007-2008.

#### **PUBLICATIONS COMMITTEE:**

American Association for Cancer Research – Member, 2004-2007. This committee provides oversight and policy on all four journals of AACR

#### **ASSOCIATE EDITOR:**

American Journal of Physiology- Heart and Circulatory Physiology – 2004-2011  
Vascular Pharmacology – 2010 – present  
Atherosclerosis, Thrombosis and Vascular Biology – 2012  
Cancer Research – 2013 - present

#### **EDITORIAL BOARDS:**

##### *Past:*

Journal of Histochemistry and Cytochemistry – 1999-2006  
Endothelium – 1999-2006  
Laboratory Investigation – 2002 – 2007  
Circulation Research – 2003-2006  
Vascular Pharmacology – 2009 – 2010

##### *Current:*

Angiogenesis – 1998-present  
Cancer Biology and Therapy – 2001-present  
Matrix Biology – 2006-present  
Journal of Cell Biology – 2008 – present  
Atherosclerosis, Thrombosis and Vascular Biology – 2008 - present  
Cardiovascular Pathology – 2010 - present

#### **PROFESSIONAL SOCIETIES, MEMBER:**

##### Past Member:

International Society for Matrix Biology, 1993-2000  
United States and Canadian Academy of Pathology, 1994-2000  
Endocrine Society, 1996-2000  
American Association of Anatomists, 1998-2014

##### Active Member:

American Association for the Advancement of Science, 1989-present  
American Society for Cell Biology, 1993-present  
American Association for Cancer Research, 1994-present  
American Society for Microbiology, 1994-present  
NAVBO (North American Vascular Biology Organization), 1994-present  
Society for Developmental Biology, 1994-present  
American Society for Investigative Pathology, 1996-present  
American Heart Association, 1997-present  
Microcirculatory Society, 1998-present  
Histochemical Society, 1998-present  
American Society for Matrix Biology, 2000-present

#### **PARTICIPATION IN COMMITTEES:**

##### **Study Sections:**

- Peer Review Section - American Heart Association, Washington Affiliate; March 1994
- Department of Defense - Army, (Pathobiology 4) Bethesda, MD, November 1995; September 1996; September 1997
- NIH - Special Study Section Z, ZRG7; April, 1996; November 1996; March 1997
- NSF, Ad Hoc reviewer, August, 1996, October 1997
- American Heart Association - Dallas, October, 1996; 1997
- NIH - Experimental Cardiovascular Sciences - Bethesda, MD, June 1999 – Ad Hoc
- NIH - Experimental Cardiovascular Sciences - Washington, D.C., March 2000 – Ad Hoc
- NIH - Experimental Cardiovascular Sciences - Bethesda, MD, October 2000 – Ad Hoc
- NIH – Oncological Sciences Study Section Boundary Team, Washington, D.C., 2001 – Member
- NIH – NHLBI – RFA: “ Coordination of vascularization and lung development”, Bethesda, MD, June 2003
- NIH - Experimental Cardiovascular Sciences - Washington, D.C., 2001-2003 – Member
- NIH – Cardiovascular Development and Differentiation – Washington, D.C., 2004-2005 – Chair
- HHMI – Review of Medical-Research applicants, 2007–2009, Member.
- AACR Elliot and Folkman Awards – Review Committee, 2008, Member.
- Agence Nationale de la Recherche, INSERM, 2010-2012
- NIH – Cardiovascular Development and Differentiation – Wash. D.C., 2010-2014 – Chartered Member
- HHMI – Review of Summer Medical Fellows Program, 2014, Member
- Associazione Italiana per la Ricerca sul Cancro, Reviewer, 2010 – present

##### **Societies:**

- North American Vascular Biology Organization (NAVBO) Council, 2001-2004
- NAVBO Membership committee, Chair 2001-present
- American Heart Association (AHA) Council, 2003-present
- Conference Planning Committee of the Arteriosclerosis, Thrombosis and Vascular Biology Council – AHA (2003-2006)



- Program Committee for the American Society on Investigative Pathology Meeting - 2004-2005
- Program Committee for Experimental Biology – ASIP Meeting – 2006.
- AACR Committee for selection of 2008-2009 Kirk A. Landon-AACR Price for Basic Cancer Research
- AACR Committee Chair for Selection 2014 –Minorities in Cancer Research Jane Cooke Wright Lectureship

#### **Advisory Boards:**

- Elected Member of the Scientific and Medical Advisory Board for the Hereditary Hemorrhagic Telangiectasia Foundation, 2006-2014
- Elected Member of the Scientific Advisory Board for the Gordon Research Conferences, 2007-2013

#### **Other Committees:**

- Elected Member of the Gordon Research Conference Council, 2006-2007

### **PARTICIPATION IN EVENTS FOR UNDERREPRESENTED GROUPS**

- Keynote Address for MARC End of Year Banquet, UCLA, Los Angeles, CA May 28, 2015

### **ORGANIZATION OF MEETINGS / SYMPOSIUMS**

#### **Scientific Meetings:**

- Anti-Angiogenesis and Drug Delivery to Tumors: Bench to Bedside and Back. AACR Special Conference, Boston, November 9-13, 2005. Organizers: Rakesh Jain, Lee Ellis and Luisa Iruela-Arispe.
- Institute of Pure and Applied Mathematics (IPAM) – UCLA, Special meeting on Angiogenesis. May 6-12, 2006. Organizers: Mark Green and Luisa Iruela-Arispe.

#### **Mini-Symposiums Chair or Co-chair:**

- Angiogenesis in Health and Disease-Cardiovascular Injury, Repair and Adaptation International Society for Heart Research, Vancouver, B.C., Canada, July 1997.
- Angiogenesis- Experimental Biology/ NAVBO, Washington D.C., April 1999.
- Cell Biology of Angiogenesis-ASCB meeting, Washington, D.C., December 2001.
- Blood Vessel Club, NAVBO, in Experimental Biology Meeting, New Orleans, April 2002.
- Focus Group on Developmental Vascular Biology, NAVBO, in Experimental Biology Meeting, SD, April 2003.
- Tumor Biology Mini-Symposium at the 2005 AACR Annual Meeting, Los Angeles, April 2005.
- Anti-Angiogenesis and Cancer Mini-Symposium at the 2011 AACR Annual Meeting, Orlando, Florida, April 2011.

#### **Gordon Conferences:**

- Vice-Chair: Angiogenesis and Microcirculation, Rhode Island, August, 2001- (David Cheresh - Chair)
- Vice-Chair: Vascular Biology, Ventura, CA, January, 2003 (Garry Owens – Chair)
- Chair: Angiogenesis and Microcirculation, Rhode Island, August, 2003- (Elisabetta Dejana – Vice-Chair)
- Chair: Vascular Biology, Ventura, CA, February, 2005 (Brad Berk, Vice-Chair)

#### **Workshops:**

- Co-Chair: Developmental Biology Workshop, Asilomar, CA, February 1-4, 2004 – (Brant Weinstein –Co-chair)
- Vasculata, UCLA, August 16-19, 2006.

#### **Keystone Symposia:**

- Co-Chair: Molecular Mechanisms of Angiogenesis in Development and Disease, Vancouver British Columbia, Canada, January, 2008– (Mark Majewsky and Peter Carmeliet –Co-chairs)
- Co-Chair: Angiogenesis and Lymphangiogenesis in Cancer, Colorado, January 2009. (Lee Ellis – Co-Chair)

Organizer and site coordinator of the 16th International Vascular Biology Meeting, June 20-24th, 2010.

Organizer of the New York Academy of Sciences Meeting: Targeting VEGF-mediated Tumor Angiogenesis in Cancer Therapy, New York – June 19 – 20, 2014

Organizer: 2017 Keystone Symposium in the area of Angiogenesis

## **INVITED SPEAKER – MEETINGS:**

### **1990 - 1996**

22nd Northwest Developmental Biology Meeting, Friday Harbor, WA; May, 1990.  
Cerebral Vascular Biology Conference, Keynote speaker, Duluth, Minnesota; July 11-13, 1992.  
Sociedad Mexicana de Ciencias Fisiologicas A.C. Satellite Course: Cellular and Molecular Bases of Neuroendocrine Communication, Xalapa, Mexico, speaker; July, 1992.  
American Society for Cell Biology Meeting, Denver, Colorado; November 15-19, 1992.  
American Society for Cell Biology Meeting, New Orleans, Louisiana; December, 16-20, 1993.  
Experimental Biology Meeting (FASEB), Atlanta, Georgia; February, 1995.  
American Society for Investigative Pathology Meeting, New Orleans; June, 1996.  
Meeting on Thrombospondin and its Functional Relatives, SPARC, Osteopontin, and Tenascin, Seattle; June, 1996.

### **1997**

Gordon Conference on Wound Repair, New Hampshire; June, 1997.  
International Symposium on Thrombosis and Haemostasis, Florence, Italy; June 1997.  
Cardiovascular Injury, Repair and Adaptation, International Society for Heart Research, Chair - Symposium: Angiogenesis in Health and Disease. Vancouver, B.C., Canada; July, 1997.  
Gordon Conference on Angiogenesis and Microcirculation, Newport, Rhode Island; August, 1997.  
Era of Hope, Organized by the Department of Defense, Breast Cancer Research Program Meeting, Washington, DC; October, 1997.

### **1998**

Angiogenesis and Cancer, AACR Special Conference, Organizers: J. Folkman and M. Klagsbrun, Florida; January, 1998.  
Meeting on Vascular and Myocardial Aspects of Ischemic Heart Disease, Lake Tahoe, Nevada; February, 1998.  
Annual Meeting of European Society for Clinical Investigation. Workshop: "Molecular and Cellular Basis of Angiogenesis: The role of growth factors". Krakow, Poland; April 1998.  
Gordon conference on Vascular Biology, New Hampshire; June 1998.  
Anti-Cancer Proteins and Drugs: Structure, Function and Design. New York Academy of Sciences Meeting. New York, NY; November 1998.

### **1999**

Experimental Biology and NAVBO meeting. Speaker and Symposium and co-chair. Washington DC; April 1999.  
Symposium on Reproductive Angiogenesis, Melbourne, Australia; May, 1999.  
Extracellular Matrix in Diabetes and Atherosclerosis meeting, Univ. Washington, Seattle; May 1999  
WFTN, Algarve, Portugal; June, 1999.  
Gordon Conference on Matrix Metalloproteinases, New Hampshire; August 1999.  
Gordon Conference on Angiogenesis and Microcirculation, Newport, Rhode Island; August 1999.  
Women and Renal Disease Conference, Women in Nephrology and National Institutes of Health, Bethesda, Maryland; September 1999.

### **2000**

Keystone Symposia, Experimental and Clinical Regulation of Angiogenesis, Salt Lake City, Utah; March 2000.  
NAVBO meeting, Denver Colorado; May 2000.  
Meeting of the Biology of Thrombospondins and Other Modulatory Extracellular Matrix Proteins, University of Wisconsin, Madison, Wisconsin, June 2000.  
Gordon Conference on Vascular Cell Biology, Plymouth, New Hampshire, July 2000.  
International Scientific Symposium of the SPP 1069 "Angiogenesis", Kloster Seeon, Germany, October 2000.  
Angiogenesis and Cancer, AACR Special Conference, Traverse City, Michigan, October 2000.

## **2001**

First California Cancer Research Program Symposium, Sacramento, California, April 2001.  
Keystone Symposia, Angiogenesis and Chronic Diseases, Keystone, Colorado, April 2001.  
Mouse Models of Human Cancers Consortium Steering Committee Meeting, National Cancer Institute, San Francisco, California, July 2001.  
Biomedical Sciences Symposium, Columbia University, Harriman, New York, July 2001.  
Gordon Conference on Angiogenesis & Microcirculation, Newport, Rhode Island, August 2001.  
American Society for Cell Biology, Washington D.C., December 2001.

## **2002**

American Association for Cancer Research, San Francisco, California, April 2002.  
Experimental Biology / ASIP, New Orleans, Louisiana, April 2002  
XIIIth International Vascular Biology Meeting, Japan, May 2002  
International Conference on Angiogenesis. Angiogenesis: basic mechanisms and therapeutic implications, Monte Verita, Ascona, Switzerland, June, 2002.  
Symposium on Tissue Remodeling, Ames, Iowa, July, 2002.  
Cold Spring Harbor Meeting on Oncogenes, August, 2002.  
AARC – Schilling Conference on: Tumors as outlaw organs, Santa Cruz, FL, 2002.  
Era of Hope, Breast Cancer National Meeting, Orlando, FL, September 2002.  
Matrix Biology – First meeting of the ASMB, Texas, November 2002.

## **2003**

Gordon Conference on Vascular Biology, Ventura, CA, January 2003.  
Experimental Biology, San Diego, CA, April, 2003  
Atherosclerosis and Thrombosis Meeting, Washington DC, May 2003  
International Meeting on Angiogenesis and Cancer, Reykjavik, Island, June, 2003  
Gordon Conference on Angiogenesis and Microcirculation, Salve Regina, Newport, RI, August, 2003  
Gordon Conference on Matrix Metalloproteinases, Montana, August, 2003  
AACR Angiogenesis Conference, Chicago, October, 2003  
American Society of Nephrology – Renal week 2003, San Diego, November 2003

## **2004**

Keystone Symposia, Angiogenesis and Chronic Diseases, Santa Fe, New Mexico, January 2004.  
First Workshop on Developmental Vascular Biology, Asilomar, California, February 2004  
Fourth Interdisciplinary Euroconference on Angiogenesis, Helsinki, Finland, May 2004.  
Vasculata, Course on Vascular Biology, Seattle, July 2004.  
Symposium on Retinal and Choroidal Angiogenesis, Nashville, October, 2004.  
Mayo Clinic Symposium on Angiogenesis, October, 2004  
Second National Meeting of the American Society for Matrix Biology, November, 2004.

## **2005**

Keystone Symposia, The Role of the Microenvironment in Tumor Induction and Progression, Banff, Alberta, Canada, February 2005.  
Gordon Conference on Vascular Cell Biology, Ventura, CA, February 2005  
Experimental Biology, San Diego, CA, April 2005  
AACR meeting, Los Angeles, CA, April 2005  
Fifth Interdisciplinary Euroconference on Angiogenesis, Barcelona, Spain, May 2005  
Angiogenesis Gordon Conference, Newport, RI, August 2005  
Progesterone Receptor Special Conference, Chicago, IL, September 2005

## **2006**

Second Workshop on Developmental Vascular Biology, Asilomar, California, February 2006  
Experimental Biology, San Francisco, CA, April 2006  
Institute of Pure and Applied Mathematics (IPAM) – UCLA Special Meeting on Angiogenesis, May, 2006  
NIH Workshop – Hereditary Hemorrhagic Telangiectasia: Vascular Biology and Pathophysiology, Bethesda, MD, June, 2006  
Workshop on Signal Transduction, Institute of Cellular Physiology, UNAM, Mexico, July 2006  
Vasculata, Los Angeles, CA, August, 2006

## 2007

Vascular Matrix Biology and Bioeng. Workshop, NAVBO, Whistler, British Columbia, Canada, March 2007.  
Keystone Symposia on Molecular Targets for Cancer, Whistler, British Columbia, Canada, March 2007  
Experimental Biology, Washington DC, April 2007  
Seventh ESH (European School of Haematology) Euroconference on Angiogenesis, Albufeira, Portugal, May 2007.  
Gordon Conference on Matrix Metalloproteinases, Piza, Italy, June, 2007.  
FASEB Summer Research Conf. on Thrombospondins and Other Matricellular Proteins, Tucson, AZ, June 2007.  
Gordon Conference on Angiogenesis and Microcirculation, Newport, RI, August, 2007.  
Vasculata, a vascular biology course organized by NAVBO. Raleigh, NC, August, 2007.  
First Mexican Meeting on Signal Transduction, Veracruz, September, 2007

## 2008

Keystone Symposia on Molecular Mechanisms of Angiogenesis in Development and Disease, Vancouver, British Columbia, Canada, January, 2008.  
Third Workshop on Developmental Vascular Biology, Asilomar, California, February 2008.  
The 10<sup>th</sup> International Symposium on Anti-Angiogenic Agents. San Diego, California, February, 2008.  
Regulation of Tumor Angiogenesis, Tokyo, Japan, March 2008.  
Experimental Biology, San Diego, April, 2008.  
Third International Course on Angiogenesis, Barcelona, Spain, April, 2008.  
Conference on William's Syndrome, Yale, Connecticut, May, 2008.  
ESH 8<sup>th</sup> Euro-Conference on Angiogenesis, Paris, France, May, 2008  
International Vascular Biology Meeting, Sydney, Australia, May, 2008  
International Symposium on Vascular Differentiation and Remodeling, Frankfurt, Germany, July 2008.  
NAVBO Workshop: Biology of Signaling in the Cardiovascular System, Hyannis, MA, September 2008  
17<sup>th</sup> Annual Growth Factor and Signal: Extracellular and Membrane Proteases and Cell Sig., September 2008.  
International Scientific Symposium of the SPP 1069 "Angiogenesis", Kloster Seeon, Germany, September 2008.  
3<sup>rd</sup> Mayo Clinic Angiogenesis Symposium, Rochester, MN. October, 2008.

## 2009

Keystone Symposia on "Angiogenesis and Lymphangiogenesis in Cancer", Montana, January, 2009.  
Keystone Symposia on "Dissecting the Vasculature: Function, Molecular Mechanisms and Malfunction", Vancouver, British Columbia, Canada, February, 2008.  
Scleroderma Research Foundation, San Francisco, 2009.  
Experimental Biology, New Orleans, April, 2009.  
Perinatal and Developmental Medicine Symposium, Mead/Johnson Nutrition Conference, Aspen, CO, May, 2009  
EMBO Workshop, Helsinki, Finland, June, 2009  
Endocrine Society Meeting, Washington DC, June 2009.  
Angiogenesis Gordon Conference, Salve Regina, Newport, RI, August 2009.  
Matrix Metalloproteinase Gordon Conference, Les Diaboliques, Switzerland, September, 2009.

## 2010

Keystone Symposia on "Integration of Developmental Signaling Pathways", Victoria, Canada, March, 2010.  
Experimental Biology, San Diego, California, April, 2010.  
International Vascular Biology Meeting, Los Angeles, California, June, 2010.  
ULF CADASIL Scientific Symposium, Chicago, July, 2010.  
Gordon Conference on Transglutaminases, Davidson, NC, July 2010.  
Meeting on Avastin Angiogenesis Biomarker Challenge, Vancouver, Canada, July 2010.  
Gordon Conference on Endothelial Cell Phenotypes in Health and Disease, UNE, Maine, August 2010  
SACNAS (Science, Technology & Diversity for a Sustainable Future) Annual Meeting Anaheim, CA, Oct., 2010 (Keynote address)  
University of South Carolina Cardiovascular COBRE Conference, November, South Carolina, November, 2010.

## 2011

Vascular Biology Gordon Conference, February, 2011.  
AACR Annual Meeting, Orlando, Florida, April, 2011.  
Experimental Biology, Washington DC, April, 2011.

Extracellular Matrix in Health and Disease Symposium, Harvard University, April 2011.  
Second Meeting on Avastin Angiogenesis Biomarker Challenge, San Francisco, USA, April 2011.  
8<sup>th</sup> International Symposium Biology of Endothelial Cells, Zurich, Switzerland, June 2011  
Gordon Research Conference on Cell Surface Proteolysis, Davidson College, NC, July 2011.  
International Society on Thrombosis & Haemostasis, Kyoto, Japan, July 2011.  
Gordon Conference on Angiogenesis, Salve Regina University, Newport RI, August 2011.  
David W. Smith Workshop on Malformations and Morphogenesis – Lake Arrowhead, CA, Sept. 2011  
Biomedical Research Scientific Symposium – New York, NY, Sept. 2011  
Mechanisms of Organ Repair and Regeneration Meeting – Washington DC, Sept. 2011

## **2012**

Keystone Symposia, Angiogenesis Meeting, Snowbird, UT, January 2012  
Gordon Research Conference on Reprogramming Cell Fate, Hotel Galvez, Galveston, TX, February 2012  
American Association for Cancer Research, Annual Meeting, Chicago, IL, March 2012  
American Association of Anatomists, Annual Meeting, San Diego, CA, April 2012  
Experimental Biology, Annual Meeting, San Diego, CA, April 2012  
Understanding Cancer, Univ. Medical Center, Utrecht, The Netherlands, April 2012  
Cell Press Symposium on Angiogenesis and Metabolism, Belgium, July 2012  
Third Meeting on Avastin Angiogenesis Biomarker Challenge, Munich, Germany, July, 2012.  
Workshop: Imaging Analysis and Computational Modeling for Cancer and its Therapy, ECCB'12 Meeting, Sept. 2012.  
15<sup>th</sup> Imperial College London Symposium. Vascular endothelium: role in disease pathogenesis and as a therapeutic target. London, England. November 2012.

## **2013**

Cancer and Microenvironmental Meeting, Lausanne, Switzerland, March 2013  
University of Washington, Seattle, Angiogenesis Symposia, August 2013  
NAVBO Vascular Biology, Annual Meeting, Cape Cod, MA, October 2013  
American Society for Cell Biology, Annual Meeting, New Orleans, LA, December, 2013

## **2014**

16<sup>th</sup> International Symposium on Anti-Angiogenic Therapy, La Jolla, CA, February 2014  
CAMP (California Alliance for Minority Participation) Annual Meeting, (Keynote address) UC Irvine, CA February 2014  
Keystone Symposia, Metabolism and Angiogenesis, Whistler, B.C. March 2014  
American Association of Cancer Research Annual Meeting, San Diego, CA March 2014  
Arteriosclerosis, Thrombosis and Vascular Biology Annual Meeting, Toronto, Canada, May 1 – 3, 2014  
Gordon Research Conference on Cell Polarity Signaling, Bentley University, Waltham, MA, June 3 – 6, 2014  
New York Academy of Sciences Conference “Targeting VEGF-mediated Tumor Angiogenesis in Cancer Therapy” New York, NY, June 19 – 20, 2014  
Gordon Research Conference on Notch Signaling in Development, Regeneration and Disease, Bates College, Lewiston, Maine, July 20 – 24, 2014  
NIH/National Cancer Inst. CCR Grand Rounds, Washington D.C. September 5, 2014  
Matrix Biology Annual Meeting, Cleveland, OH, October 12-15, 2014  
NAVBO Vascular Biology, Annual Meeting, Asilomar Conference Center, California, October 19 – 23, 2014

## **2015**

Gordon Research Conference on Vascular Cell Biology, Four Points Sheraton, Ventura, CA, January 18-23, 2015  
Gordon Research Seminar on Angiogenesis (Keynote Speaker), Salve Regina, RI, July 31<sup>st</sup> to August 1<sup>st</sup>, 2015.  
Gordon Research Conference on Angiogenesis, Salve Regina, Rhode Island, August 2-7, 2015.  
The 4<sup>th</sup> Annual Matsumoto Conference of Lymphology, Asama Spa Miyamaso, August 21 – 22, 2015  
The American Heart Association Scientific Sessions, November 7 -11, 2015, Orlando, FL  
14<sup>th</sup> Annual Wound Healing: Science & Industry Conference, Peter Sheehan Diabetes Care Fdn., Inc. December 10-13, 2015, San Juan, Puerto Rico

## **INVITED OUTSIDE LECTURES:**

### **1993-2004**

Scripps Clinic and Research Foundation, La Jolla, CA; January 1993.  
Saint Francis Hospital, Hartford; Connecticut, January 1993.  
University of Chicago, Dept. of Pathology; Chicago, February, 1993.  
University of Minnesota, Dept. of Biochemistry and Molecular Biology; Duluth, March 1993.  
Tuft University, St. Elizabeth's Hospital; Boston, April 1993.  
Western Connective Tissue Society Meeting; LaConner, WA, April 1993.  
Harvard Medical School, Children's Hospital; Boston, April 1993.  
Northwestern University, Chicago, Illinois, April 1993.  
Harvard Medical School, Beth Israel Hospital, Boston, Massachusetts, July 1993.  
Harvard Medical School, Dept. of Pathology, Grand Rounds, Boston, Massachusetts, November 1994.  
Yale University, Dept. of Pathology, Hartford, Connecticut, April 1995.  
Brigham and Women's Hospital, Dept. of Pathology, Boston, Massachusetts, April 1995.  
Tuft University, St. Elizabeth's Hospital, Boston, Massachusetts, June 1995.  
Children's Hospital, Boston, Massachusetts, December 1995.  
Human Genome Systems, Bethesda, Maryland, January 1996.  
Saint Francis Hospital, Hartford, Connecticut, February 1996.  
Massachusetts General Hospital, Shrines Institute, Boston, Massachusetts, March 1997.  
University of California LA, Los Angeles, California, April 1997.  
Children's Hospital; Boston, Massachusetts, November 1997.  
University of San Antonio, Texas, February 1998.  
Genentech, San Francisco, California, June 1998.  
Scripps Clinic and Research Foundation, La Jolla, California, January 1999.  
Neurocrine, La Jolla, California, February 1999.  
Axys Pharmaceuticals, La Jolla, California, March 1999.  
Immunex, Seattle, Washington, July 2000.  
Center for Transgene Technology and Gene Therapy, Leuven, Belgium, September 2000.  
Scripps Research Institute, La Jolla, California, November 2000.  
Wayne State University, Dept. of Pathology, Detroit, Michigan, July 2001.  
University of California, San Francisco, September 2001.  
University of Virginia, Charlottesville, October 2001.  
University of Alabama at Birmingham, December 2001.  
University of Pennsylvania Cancer Center Philadelphia, PA, May, 2002.  
University of North Carolina, Medical School Chapel Hill, NC, May 2002.  
Berlex, Richmond, California, July 2002.  
Chiron, San Francisco, August 2002.  
University of Kansas, March 2003.  
Children's Hospital, Los Angeles, CA, May 2003.  
University of California, San Francisco – Seminar for the Women Leaders in Science, March 2004  
QLT, Vancouver, Canada, April 2004.

### **2005**

Medical College of Georgia, Augusta, GA, January 2005.  
Stanford University, Palo Alto, CA, February 2005  
Cleveland Clinic, Cleveland, Ohio, March 2005.  
Regeneron, New York, June 2005.

### **2006**

Karolinska Institute, Stockholm, Sweden, February 2006.  
University of Uppsaka, Sweden, February, 2006.  
University of Arizona, School of Medicine, March 2006.  
University of Michigan, Center for Organogenesis, April 2006.  
Harvard Medical School, Boston, MA, May 2006.  
University of Oklahoma, May 2006.  
University of California at Irvine, November 2006.

**2007**

The Cleveland Clinic Foundation, April 2007.  
MD Anderson Cancer Center, June 2007.

**2008**

University of Texas, Dallas, March, 2008.  
Saint Jude Children Research Hospital, Memphis, March, 2008.  
University of Iowa, Iowa, April, 2008.  
University of Connecticut, May, 2008.  
EHT Zurich, Department of Pharmacology, Zurich, Switzerland, July, 2008.  
Hospital de la Princesa, Madrid, Spain, July, 2008.

**2009**

Genentech, March, 2009.  
Duke University, Department of Pharmacology, April, 2009.  
University of Washington, Seattle, Dept. of Pathology, May, 2009.  
University of California at San Francisco, Cancer Center, May, 2009  
National Institutes of Health (NHLBI), July, 2009  
University of North Carolina, Chapel Hill, McAllister Hear Institute, September, 2009  
University of Toronto, September, 2009  
University of Illinois, Dept. of Pharmacology, December, 2009.

**2010**

University of Pennsylvania, Abramson Family Cancer Research Institute, Philadelphia, PA, April 2010.  
Ecole Polytechnique Federale de Lausanne, Switzerland, August, 2010  
Fundacion Centro Nacional de Investigaciones Cardiovasculares (CNIC), Madrid, Spain, September 2010.  
Duke University, Department of Pharmacology, December, 2010.

**2011**

University of Southern California, Los Angeles, CA, January 2011.  
Duke University, Department of Pharmacology, February, 2011  
Weill Cornell, Department of Developmental Biology, March, 2011  
Yale University Department of Cardiology, March, 2011  
University of Michigan, Tumor Oral Biology, April 2011  
Avastin Biomarker Pan-Tumor National Advisory Board, Genentech, April 2011  
Avastin Scientific Board, Amsterdam, July 2011  
University of Toronto, Ontario, Canada, December 2011

**2012**

California Institute of Technology, Division of Biology, Pasadena, CA, January 2012  
UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA, January 2012  
Albert Einstein College of Medicine, NY, NY, February 2012  
University of Pennsylvania, Cardiovascular Institute, Philadelphia, PA, March 2012  
Emory University, Division of Cardiology, Atlanta, GA, March 2012  
UCSD Division of Cardiology, La Jolla, CA, April 2012  
University of Rochester, Division of Cardiology, Rochester, NY, May 2012.  
University of Helsinki, Biomedicum I, Helsinki, Finland, September 2012.  
University College of London, England, November 2012.

**2013**

Comprehensive Cancer Center, Vienna, Austria, January 2013  
Department of Computational Biology, ETZ, Zurich, Switzerland, March 2013  
University of Uppsala, Sweden, June 2013  
Hospital Duran in Reynals, Barcelona, Spain, June 2013

**2014**

Joslin Diabetes Center, Boston, MA, January 2014

Northwestern University, Feinberg Cardiovascular Research Seminar, Chicago, IL, March 2014  
University of California, Irvine, Department of Developmental & Cell Biology Seminar, May 15, 2014  
Stanford University, ReMS Seminar Series, Palo Alto, CA, May 22, 2014  
HHMI Professor Competition, Chevy Chase, Maryland, May 27 – 28, 2014  
Oregon Health & Science University Seminar, Portland, Oregon, July 17, 2014  
Seminar at Saban Research Institute, Children Hospital Los Angeles, September 17, 2014

## 2015

Cell Biology and Physiology Seminar, Washington Univ. at St. Louis, February 6, 2015  
Department of Regenerative Medicine & Cell Biology, Medical Univ. of So. Carolina, April 14, 2015  
Division of Pulmonary & Critical Care, Stanford University, May 29, 2015  
Department of Pharmacology, Kitasato University, Japan, August 20, 2015  
Physiology, Biophysics and Systems Biology Seminar, Weill Cornell Medical College, September 9, 2015

## D-RESEARCH

### MAJOR RESEARCH INTERESTS:

- Regulation of Angiogenesis during Development and in Disease
- Effect of Steroid Hormones on Endothelial Cells
- Extracellular Matrix Proteins and their effect on the Modulation of Angiogenesis

### RESEARCH FUNDING INFORMATION:

#### Past:

1988-1989	CNPq Fellowship, Brazil
1991-1993	American Heart Association - Fellowship
1993-1996	Grant-in-Aid - American Heart Association, WA Affiliate Role of Thrombospondin in Angiogenesis, PI This award was returned due to relocation to Boston
1993-1995	Basil O'Connor Award, March of Dimes The Underlying Role of Extracellular Matrix Proteins in the Generation of Neural Crest Abnormalities - PI
1993-1996	Grant-in-Aid - American Heart Association, National Role of TGF- $\beta$ in Angiogenesis - PI
1996-1998	RO3 - NIH - NCI Vascular Targeting in Breast Cancer – PI
1994-1999	Principal Investigator Award, Department of Defense Suppression of Vascular Growth in Breast Tumors - PI
1994-1999	R-29 - First Award, NIH Inhibitors of the Angiogenic Response - PI
1996-1999	Grant-in-Aid - American Heart Association, National Regulation of Endothelial Cell Function by Thrombospondin – PI
1998-2003	NIH T32 HL Training Program in Angiogenesis and Inflammation (Relinquished participation due to relocation)
1999-2000	California Cancer Research Program Anti-Angiogenic Activity of METH-1 in Tumors – PI
1999-2000	Jonsson Comprehensive Cancer Center Seed Grant Angiogenesis and Cancer – Co-PI
1999-2001	American Heart Association – California Affiliate Vascular Remodeling – PI
1999-2001	Margaret E. Early Medical Research Trust Anti-Angiogenesis as a Therapy for Cancer – PI
1999-2004	NIH 1 R01 CA86256 \$153,957 / year (direct cost) Therapeutic Antiangiogenesis – PI
2001-2004	American Heart Association – National Center \$ 75,000/year



2003-2004	Mechanisms of Thrombospondin-Mediated Vascular Suppression – PI Department of Defense – Army \$70,000/year Concept Award; Endothelial cell progenitors and tumor angiogenesis
1999-2008	NIH 1 R01 CA77420 \$180,000 / year (direct cost) Suppression of Vascular Growth – PI
2003-2008	1R01 CA65624 \$ 205,000(direct cost/year) Inhibition of the Angiogenic Response
2003-2008	NIH RO1 HL74455-01 \$250,000 (direct cost/year) Progesterone Receptor and Vascular Function
2002-2012	NIH T32 HL69766 \$444,745 (direct cost/year) Vascular Biology Training Grant
2007-2012	NIH 1 R01 CA126935 \$195,000 / year (direct cost) VEGF Signaling and Tumor Microenvironment – PI
2009-2012	RB1-01328 \$312,432 (direct cost/year) Molecular Characterization and Functional Exploration of Hemogenic Endothelium
2007-2013	NIH 1R01 HL085618 \$225,000 / year (direct cost) Notch Signaling in Vascular Development and Homeostasis
2009 – 2014	Leducq Consortia \$256,000 (direct cost/ year for each member) Contribution of Notch Signaling in Arteriogenesis (Other members of the consortia: Peter Carmeliet, Michael Simons, Anne Eichmann, Holger Gerhart, and Frank Giordano)

**Current:**

**From NIH**

2012-2017	2T32 HL 69766 \$460,669 (direct cost/year) Vascular Biology Training Grant
2013-2018	R01 HL114086 \$346,712 (direct cost/year) Induction of Vascular Morphogenesis
2015-2020	1R01 CA197943 \$250,000 (direct cost/year) Underlying Mechanisms in Angiosarcoma
2015-2020	PPG NHLBI - 2P01HL030568 \$250,000 (Arispe portion, direct cost/year) Lipid and Lipoprotein Metabolism in Atherosclerosis

**From Foundations**

2015-2016	John Chomiak Memorial Research Award \$50,000 (direct cost/year) Identification of Causative Genetic Networks in Angiosarcoma
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**PUBLICATIONS (Peer review articles only):**

1. Chow, M., Boyd, C.D., Iruela-Arispe, M.L., Wrenn, D.S., Mecham, R., and Sage, H. 1989. Characterization of Elastin Protein and mRNA from Salmonid Fish (*Oncorhynchus kisutch*). *Comp Biochem Physiol B.* 93: 835-845.
2. Sage, H., Vernon, R.D., Decker, J. Funk, S., and Iruela-Arispe, M.L. 1989. Distribution of the Calcium-binding Protein SPARC in Tissues of Embryonic and Adult Mice. *J Histochem Cytochem.* 37: 819-829.
3. **Iruela-Arispe, M.L.** Hasselaar, P., and Sage, H. 1991. Differential Expression of Extracellular Proteins is correlated with Angiogenesis in vitro. *Lab Invest.* 64:174-186.
4. Paulus, W., Sage, H., Iruela-Arispe, M.L., and Liszka, U. 1991. Selective Expression of Type VIII Collagen in Tumors of the Human Brain. *Brit J Cancer.* 63:367-371.

5. **Iruela-Arispe, M.L.** and Sage, H. 1991. Expression of Type VIII Collagen during Morphogenesis of the Chicken and Mouse Heart. *Dev Biol.* 144:107-118.
6. **Iruela-Arispe, M.L.**, Bornstein, P., and Sage, H. 1991. Thrombospondin Exerts an Antiangiogenic Effect on Tube Formation by Endothelial Cells in vitro. *Proc Natl Acad Sci.* 88:5026-5030.
7. Fouser, L., **Iruela-Arispe, M.L.**, Bornstein, P., and Sage, E.H. 1991. Transcriptional Activity of the  $\alpha 1(I)$  Collagen Promoter in Endothelial Cells is Correlated with Angiogenesis in vitro. *J Biol Chem.* 266:18345-18351.
8. Iruela-Arispe, M.L., Diglio, C.A. and Sage, E.H. 1991. Modulation of Extracellular Matrix Proteins by Endothelial Cells undergoing Angiogenesis in vitro. *Arterioscler Thromb.* 11:805-815.
9. Raines, E.W., Lane, T., **Iruela-Arispe, M.L.**, Ross, R., and Sage, E. H. 1992. The Extracellular Glycoprotein SPARC Interacts with Platelet-derived Growth Factor (PDGF)-AB and BB and Inhibits Binding of PDGF to its Receptor. *Proc Natl Acad Sci.* 89:1281-1285.
10. Vernon RB., Angello, J.C., **Iruela-Arispe, M.L.**, Lane, T.F., and Sage, E.H. 1992. Reorganization of Basement Membrane Matrices by Cellular Traction Promotes the Formation of Cellular Networks in vitro. *Lab Invest.* 66:536-547.
11. Lane, T., **Iruela-Arispe, M.L.**, and Sage, E. H. 1992. Regulation of Gene Expression by SPARC during Angiogenesis in vitro: Changes in Fibronectin, Thrombospondin-1, and Plasminogen Activator Inhibitor-1. *J Biol Chem.* 267:16736-16745.
12. Jäveläinen, H.T., **Iruela-Arispe, M.L.**, Sandell, L.J., Sage, E.H., and Wight, T.N. 1992. Modulation of Decorin, Biglycan and Type I Collagen Synthesis by Sprouting Bovine Aortic Endothelial Cell Cultures. *Exp Cell Res.* 203: 395-401.
13. Floege, J., Johnson, R.J., Gordon, K., Yoshimura, A., Campbell, C., **Iruela-Arispe, M.L.**, Alpers, C.E., Couser, W.G. 1992. Altered Glomerular Extracellular Matrix Synthesis in Experimental Membranous Nephropathy: Studies in Two Models and Cultures Glomerular Epithelial Cells. *Kidney Int.* 42: 573-585.
14. **Iruela-Arispe, M.L.** and Sage, E. H. 1993. Endothelial Cells Exhibiting Angiogenesis in vitro Proliferate in Response to TGF- $\beta$ 1. *J Cell Biochem.* 52: 414-430.
15. Bassuk, J.A., **Iruela-Arispe, M.L.**, Lane, T.F., Berg, R.A., and Sage, E.H. 1993. Molecular analysis of chicken embryo SPARC. *Europ J Biochem.* 218:117-127.
16. **Iruela-Arispe, M.L.**, Liska, D.A., Sage, E. H., and Bornstein, P. 1993. Differential Expression of Thrombospondin 1, 2, and 3 during Murine Development. *Dev Dyn.* 197:40-56.
17. Battegay, E. J., Rupp, J., **Iruela-Arispe, M.L.**, Sage, E.H., and Pech, M. 1994. PDGF-BB modulates endothelial proliferation and angiogenesis in vitro via PDGF  $\beta$ -receptors. *J Cell Biol.* 125:917-928.
18. Lane, T.F., **Iruela-Arispe, M.L.**, Johnson, R.S., and Sage, E.H. 1994. SPARC is a source of copper-binding peptides that stimulate angiogenesis. *J Cell Biol.* 125:929-943.
19. Gariano, R.F., **Iruela-Arispe, M.L.**, and Hendrickson, A.E. 1994. Vascular Development in the primate retina: Comparison of lamina plexus formation in monkey and human. *Invest Ophtal Vis Sci.* 35:3442-3455.
20. **Iruela-Arispe, M.L.**, Lane, T.F., Redmond, D., Reilly, M., Bolender, R., and Kavanagh, T.J., and Sage, E.H. 1995. Expression of SPARC during the development of the chorioallantoic membrane: protein degradation produces angiogenic peptides. *Mol Biol Cell.* 6:327-343.

21. Vernon, R.B., Wight, T.N., Lara, S., **Iruela-Arispe, M.L.**, Angello, J.C., and Sage, E.H. 1995. Tesselated networks of endothelial cells that arise spontaneously *in vitro* are associated with traction-generated templates of type I collagen. *In vitro - Cell Dev Biol Anim.* 31:120-131.
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