Jeffrey R. Bender, M.D.

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Date & Place of Birth: June 23, 1953; Hartford, CT

Spouse: Judith D. Bender, M.S.W., A.C.S.W.

**Training and Professional Experience:**

2014- Director, Yale Cardiovascular Research Center

2006-09 Co-director, Cardiovascular Medicine Fellows' Clinic

2002- Robert I. Levy Professor of Preventive Cardiology

2000- Professor of Medicine (Cardiovascular Medicine) & Immunobiology

1999-00 Associate Professor of Immunobiology with tenure

1997-00 Associate Professor of Medicine (Cardiovascular) with tenure

1995-01 Director, Boyer Center for Molecular Medicine Junior Faculty Clinical Scholar’s Program

1994- Associate Chief of Cardiovascular Medicine, Research

1993-97 Associate Professor of Medicine (Cardiovascular) and Immunobiology (Adjunct)

1992- Cardiovascular Fellows’ Coordinator of Research

1991-03 Member, Molecular Cardiobiology Program, Boyer Center for Molecular Medicine

1988-93 Assistant Professor of Medicine; Director, Cardiovascular Immunology Laboratory, Division of Cardiovascular Medicine; Member, Cardiac Transplant Group; Attending Physician, Cardiac Catheterization Laboratory, Yale University School of Medicine, New Haven, CT

1986-88 Clinical Assistant Professor of Medicine; Stanford University School of Medicine, Stanford, CA

1984-88 Research Fellow in Immunology, Department of Pathology, Stanford

1983-86 Postdoctoral Fellow in Cardiology, Stanford University, Stanford CA

1982-83 Chief Medical Resident; Instructor and Associate in Medicine, Yale University School of Medicine, New Haven, CT

1979-82 Resident in Medicine, Yale-New Haven Hospital, New Haven, CT

# Education:

1979 M.D., University of California, San Francisco, CA

1975 B.A., magna cum laude, Brandeis University, Waltham, MA

**Memberships and Certification:**

2012-15 Member, American Heart Association National Research Committee

2007-09 Member, American Heart Association Region I Steering Committee

2007-09 Member, American Heart Association Founders Research Committee

2006-07 Chairman, American Heart Association Heritage Research Committee

2005-07 Leadership Development Committee, American Heart Association Heritage Board

2002- Association of American Physicians

2002- Association of University Cardiologists

2001- Fellow of Council on Basic Cardiovascular Science, American Heart Association

1998- Member, Interurban Clinical Club

1996- American Society for Clinical Investigation

1992- Fellow, American College of Cardiology

1990- Member, American Association of Immunologists

1989- Member, American Federation for Clinical Research

1988- American Heart Association, Basic Science and Circulation Councils

1986- Diplomate, American Board of Internal Medicine, Cardiovascular Subspecialty Board

1995- Member, International Society for Heart Transplantation

1995- Member, Physicians for Social Responsibility

1983- Diplomate, American Board of Internal Medicine

1983- California State Medical Licensure

1982- Connecticut State Medical Licensure

1980- Diplomate, National Board of Medical Examiners

## Editorial Responsibilities

Circulation Research

Circulation

## Journal Reviewer for 2015-2016

### Journal of Immunology

*Circulation*

*Cancer Research*

*Circulation Research*

*American Journal of Pathology*

*Journal of Clinical Investigation*

*Proceedings of National Academy of Sciences, USA*

*Journal of Cell Biology*

*American Journal of Physiology*

*Microcirculation*

*Nature Medicine*

*Immunity*

## Current Yale University Committees and Advisory Positions

2015- Chairman, Yale School of Medicine Dean's Faculty Advisory Council

2006- Editor and Faculty Advisor, Yale Journal of Biology and Medicine

2002- Member Steering Committee, Interdepartmental Program in Vascular Biology and Therapeutics

2002- Attending and faculty supervisor, Neighborhood Health Project (Yale medical student-run)

## External Advisory and Policy Committees

2012-14 Chairman, American Heart Association Research Portfolio Task Force

2011-15 National Research Committee, American Heart Association

2011-15 ATVB Council Leadership Committee, American Heart Association

2009- T32 Training Program in Cardiovascular Research, Albert Einstein College of Medicine (P.I.

 Richard Kitsis)

2006- Vascular Injury Project Expert Advisory Group, Pfizer Global R&D

2005- T32 Training Program in Cardiovascular Medicine and Research, Columbia University (P.I. Steven Marx)

**Grant Reviewer:**

American Heart Association (New England Region Peer Review Consortium) 1991-94 and Affiliate

Study Group (National Committee) 1995

National Heart, Lung and Blood Institute Ad Hoc Reviewer and Consultant, 1995, 96

American Heart Association National Study Section- Vascular Cell Biology, 1996

National Heart, Lung and Blood Institute, Pathology A Study Section Member, 1997

American Heart Association Special Review, Greater Los Angeles Multi-disciplinary Research Program, 1998

National Heart, Lung and Blood Institute, Surgery, Anesthesiology & Trauma (Transplantation) Study Section, 1999

National Heart, Lung and Blood Institute, Surgery, Anesthesiology & Trauma (Transplantation) Study Section, 2002-04

National Heart, Lung and Blood Institute, Special Emphasis Panel for K99/R00 Pathway to Independence

Awards, 2008

American Heart Association Innovative Grant Review Committee 2008

## Honors and Awards:

2014-15 President, Association of University Cardiologists

2011 Elected to National Research Committee, American Heart Association

2011 Appointed to ATVB Council Leadership Committee, American Heart Association

2010 Elected to Association of University Cardiologists Council

2006-07 Selected Chairman of American Heart Association Heritage Research Committee

2005- Appointed to Leadership Development Committee, American Heart Association Heritage Board

2005 Elected President, Interurban Clinical Club

2002 Robert I. Levy Professorship (Yale University endowed chair)

2002 Election to the Association of American Physicians

2001 Election to the Association of University Cardiologists

1999 Election to American Heart Association Heritage Board of Directors

1998 Election to Interurban Clinical Club

1996 Election to American Society for Clinical Investigation

1992 Andrew P. Mellon Award, Yale University School of Medicine

1992-98 Sackler Foundation Award

1992 Young Investigator Award, American Heart Association Basic Science Council

1988-93 Clinical Investigator Award, NIH

1986-87 Advanced Research Fellowship Award, American Heart Association

1984-86 National Research Service Award, NIH

1979 Alpha Omega Alpha, University of California, San Francisco

1975 Highest honors in biology, Brandeis University

**Selected Trainees:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Training Level** | **Training Period** | **Current Position** |
| Leslie Tackett, M.D. | Post-baccalaureate | 1988-1990 | Assistant Professor, Dept. of Surgery, Brown University |
| Cornelius Watson, Ph.D. | Postdoc | 1991-1995 | Associate Professor, and Chairman, Dept, Biology, Roosevelt University |
| Steven Pfau, M.D. | Postdoc | 1992-1994 | Associate Professor, Cardiovascular Medicine, Yale University |
| David Sher, M.D.  | Predoc (B.S./M.S.) | 1995-1997 | Instructor, Radiation Oncology, Dana Farber Cancer Institute |
| Jinyao Zhou, Ph.D. | Postdoc | 1995-1997 | UCSD Research Scientist |
| Teresa Caulin-Glaser, M.D. | Postdoc | 1994-1997 | Medical and Research Director, McConnell Heart Center, Associate Professor Ohio State University |
| Michael Blum. M.D. | Postdoc | 1995-1997 | Associate Professor, Cardiology and Department of Information Technology, UCSF |
| Oran Ayalon, Ph.D. | Postdoc | 1996-1998 | Chief Scientist and CEO, Oral Del Medical, LTD. (Israel) |
| Gene J. Wang, M.D., Ph.D. | Predoc | 1995-1999 | Director, Clinical Oncology Research, Schering-Plough |
| Kerry Russell, M.D., Ph.D. | Postdoc | 1995-1998 | Associate Professor, Cardiovascular Medicine, Yale University |
| Mehran Sadeghi, M.D. | Postdoc | 1997-2001 | Associate Professor, Cardiovascular Medicine, Yale University |
| Diviya Sinha, Ph.D. | Postdoc | 1999-2001 | Research Assistant Professor, Department of Medicine, Boston University |
| Priti Bhansali, M.D. | Predoc | 1999-2000 | Attending, Children's National Medical Center, Washington, D.C. |
| Emmanuelle Clerisme, M.D. | Predoc | 1999-2000 | Assistant Professor of Medicine, Johns Hopkins |
| Amar Krishnaswamy, M.D. | Predoc | 2001-2003 | Cardiology Fellow, Cleveland Clinic |
| Page Haynes, Ph.D. | Postdoc | 1999-2003 | Research Scientist, University of Missouri |
| Koji Hisamoto, M.D. | Postdoc | 2002-2004 | Associate Professor, Dept. of Obstetrics, Osaka Medical College |
| Lei Li, M.D., Ph.D. | Postdoc | 2001-2004 | U. Texas Medicine Resident |
| David Smith, M.D. | Postdoc | 2002-2005 | Adjunct Assistant Professor, Medicine, Yale University |
| Grace Gao, M.D., Ph.D. | Postdoc | 2003-2005 | Assistant Professor, Cardiology, University of Illinois Chicago |
| Bradley Enerson, Ph.D. | Postdoc | 2004-2006 | Research Scientist, Pfizer |
| Vinod Ramgolam, Ph.D. | Postdoc | 2002-2005 | Associate Research Scientist, Yale University |
| Douzhi Wu, M.D. | Visiting Professor (on sabbatical) | 2006-2007 | Professor,Hainan University Hospital |
| Vishal Mehra, M.D. | Predoc (Investigative Medicine Ph.D. Program) | 2005-2008 | Cardiologist and Director of Imaging Research, Geisenger Health System |
| Katie Moriarty, M.D. | Predoc (Investigative Medicine Ph.D. Program) | 2005-2008 | Cardiology Fellow,University of Minnesota |
| Gautham Rao, Ph.D. | Postdoc | 2006-2009 | Research Scientist, Genetech |
| Kyung Hee Kim, Ph.D. | Postdoc | 2005-2009 | Associate Research Scientist, Yale University |
| Yasha Modi, M.D. | Predoc (HHMI Fellow) | 2008-2009 | Residency, Miami Eye Institute |
| Jiange Zhang, Ph.D. | Postdoc | 2007-2011 | Associate Research Scientist, Yale University |
| Elias Jackson, Ph.D. | Postdoc | 2008-2012 | Assistant Professor, University of Antigua College of Medicine |
| Alan Morrison, M.D., Ph.D. | Postdoc | 2009-2014 | Assistant Professor, Cardiovascular Medicine, Brown University  |
| Current |  |  |  |
| Albert Wong | Predoc | 2010- |  |
| Sarah Huntenburg | Predoc | 2011- |  |
| Bryan Young, M.D. | Postdoc | 2012- |  |
| Charlotte Usselman | Postdoc | 2016- |  |
| Caitlin Parmer | Predoc | 2016- |  |
| Bertie Gang | Predoc | 2016- |  |

**Bibliography:**

Full Articles:

**Bender, J.R.**, Pardi, R., Karasek, M., Engleman, E.: Functional and phenotypic characteristics of lymphocytes that bind human microvascular endothelial cells in vitro. Evidence for preferential binding by natural killer cells. J. Clin. Invest. 79:1679-1688, 1987. PMID: 3495552

Pardi, R., **Bender, J.R**., Engleman, E.: Lymphocyte subsets differentially induce class II human leukocyte antigens on allogeneic microvascular endothelial cells. J. Immunol. 139:2585-2592, 1987. PMID: 3116086

Damle, N.K., **Bender, J.R**., Doyle, L., Bradley, E.: IL-2 activated human lymphocytes exhibit enhanced adhesion to normal vascular endothelial cells and cause their lysis. J. Immunol. 138:1779-1785, 1987. PMID: 3493287

Rouse, R.V., Bolin, L.M., **Bender, J.R**., Kyewski, B.A.: Monoclonal antibodies reactive with subsets of mouse and human thymic epithelial cells. J. Histochem. Cytochem. 36:1511-1517, 1988. PMID: 2461413

**Bender, J.R**., Pardi, R., Kosek, J., Engleman, E.: Cytotoxic lymphocytes morphologically alter and traverse endothelial cell monolayers. Transplantation. 47:1047-1053, 1989. PMID: 2461413

Pardi, R., **Bender, J.R**., Dettori, C., Giannazza, E., Engleman, E.: Heterogeneous distribution and transmembrane signaling properties of lymphocyte function associated antigen-1 (LFA-1) in human lymphocyte subsets. J. Immunol. 143:3157-3166, 1989. PMID: 2553807

**Bender, J.R**., Pardi, R., Engleman, E.: Antigen specific T cell receptor negative natural killer cells cytotoxic for microvascular endothelium. Proc. Natl. Acad. Sci., USA. 87:6949-6953, 1990. PMID: 2402485

Suzuki, N., Bianchi, E., Bass., H., Suzuki, T., **Bender, J.R**., Pardi, R., Brenner, C., Larrick, J., Engleman, E.: Natural killer lines and clones with apparent antigen specificity. J. Exp. Med. 172:457-462, 1990. PMCID: PMC2188332

**Bender, J.R.**, Tackett, L., Pardi, R.: Endothelial cell class II HLA expression induced by cytotoxic lymphocytes is regulated by genetically determined differences in CD11a/CD18. Transplant. Proc. 23:99-100, 1991. PMID: 1671312

Pardi, R., **Bender, J.R**.: Signal requirements for the generation of CD4+ and CD8+ T cell responses to human allogeneic microvascular endothelium. Circ. Res. 69:1269-1279, 1991. PMID: 1934357

Inverardi, L., Samaja, M., Marelli, F., **Bender, J.R**., Pardi, R.: Cellular early immune recognition of xenogeneic vascular endothelium. Transplant. Proc. 24:459-461, 1992. PMID: 1566390

Pardi, R., Inverardi, L., Rugarli, C., **Bender, J.R**.: Antigen receptor complex stimulation triggers protein-kinase C dependent CD11a/CD18-cytoskeleton association in T lymphocytes. J. Cell. Biol., 116:1211-1220, 1992. PMID: 1346786

Inverardi, L., Samaja, M., Motterlini, R., Mangili, F., **Bender, J.R.**, Pardi, R.: Early recognition of a discordant xenogeneic organ by human circulating lymphocytes. Ex vivo studies. J. Immunol. 149:1416-1423, 1992. PMID: 1386865

Petzelbauer, P., **Bender, J.R.**, Wilson, J., Pober, J.S.: Heterogeneity of dermal microvascular endothelial cell antigen expression and cytokine responsiveness in situ and in cell culture. J. Immunol. 151:5062-5072, 1993. PMID: 7691964

**Bender, J.R.**, Sadeghi, M.M., Watson, C., Pfau, S., Pardi, R.: Heterogeneous activation thresholds to cytokines in genetically distinct endothelial cells; evidence for diverse transcriptional responses. Proc. Natl. Acad. Sci, USA. 91:3994-3998 1994. PMID: 7513430

Haggerty, J., Hough-Monroe, L., Kugelman, L., **Bender, J.R**., Milstone, L.: Epican, a heparin sulfate proteoglycan form of CD44, causes cell-cell adhesion. J. Cell. Sci. 107:3183-3190, 1994. PMID: 7699015

Weiss, R.R., Whitaker-Menezes, D., Longley, J., **Bender, J.R**., Murphy, G.F.: Human dermal endothelial cells express membrane-associated mast cell growth factor. J. Invest. Dermatol. 104:101-106, 1995. PMID: 7528242

Pfau, S., Leitenberg, D., Rinder, H., Smith, B., Pardi, R., **Bender, J.R.**: Lymphocyte adhesion-dependent calcium signaling in human endothelial cells. J. Cell. Biol., 128:969-978, 1995. PMID: 7533170

Watson, C., Petzelbauer, P.P., Zhou, J., Pardi, R., **Bender, J.R**.: Contact-dependent endothelial class II gene activation induced by natural killer cells is mediated by IFN--dependent and -independent mechanisms. J. Immunol. 154:3222-3233, 1995. PMID: 7897208

Pardi, R., Bossi, G., Inverardi, L., Rovida, E., **Bender, J.R**.: Conserved regions in the cytoplasmic domains of the leukocyte integrin L/2 (LFA-1) are involved in endoplasmic reticulum retention, dimerization and cytoskeletal association. J. Immunol. 155:1252-1263, 1995. PMID: 7636193

Rovere, P., Inverardi, L., **Bender, J.R**., Pardi, R.: Feedback modulation of ligand-engaged L/2 leukocyte integrin (LFA-1) by cyclic AMP-dependent protein kinase. J. Immunol. 156:2273-2279, 1996. PMID: 8690918

Caulin-Glaser, T., Watson, C., Pardi, R., **Bender, J.R**.: Effects of 17-estradiol on cytokine-induced endothelial cell adhesion molecule expression. J. Clin. Invest. 98:36-42, 1996. PMID: 8690801

Bianchi, E., Ferrero, E., Fazioli, F., Mangili, F., Wang, J., **Bender, J.R**., Blasi, F., Pardi, R.: Integrin-dependent induction of functional urokinase receptors in primary T lymphocytes. J. Clin. Invest. 3:1133-1141, 1996. PMID: 8787676

Inverardi, L., Clissi, B., Stolzer, A., **Bender, J.R**., Pardi, R.: Endothelial carbohydrate neoepitopes recognized by human natural killer lymphocytes. Transplant Proc. 28:552-553, 1996. PMID: 8623263

Ferrero, E., Villa, A., Ferrero, M.E., Toninelli, E., **Bender, J.R**., Pardi, R., Zocchi, M.R.: Tumor necrosis factor alpha-induced vascular leakage involves PECAM-1 phosphorylation. Cancer Research. 56:3211-3215, 1996. PMID: 8764109

Inverardi, L., **Bender, J.R**., Pardi, R.: Human natural killer cells directly recognize evolutionarily conserved oligosaccharide ligands expressed by xenogeneic tissues. Transplantation. 63:1218-1330, 1997. PMID: 9158028

Blum, M.S., Balda, M.S., Anderson, J.M., **Bender, J.R.**: The actin cytoskeleton regulates human endothelial cell tight junction modulation induced by cytokines. Am. J. Physiol. 273:H286-H294, 1997. PMID: 9249502

Caulin-Glaser, T., Sessa, W., Garcia-Cardena, G., Sarrel, P., **Bender, J.R**.: 17-estradiol regulation of human endothelial cell basal nitric oxide release by a calcium/calmodulin independent mechanism. Circ. Res. 81:885-892, 1997. PMID: 9351464

Ayalon, O., Hughes, E.A., Cresswell, P., Pardi, R., **Bender, J.R**.: Induction of transporter associated with antigen processing by IFN- confers endothelial cell cytoprotection against NK-mediated lysis. Proc. Natl. Acad. Sci, USA. 95:2435-2440, 1998. PMID: 9482903

Wang G.J., Collinge, M., Blasi, F., Pardi, R., **Bender, J.R.**: Posttranscriptional regulation of urokinase plasminogen activator receptor messenger RNA levels by leukocyte integrin engagement. Proc. Natl. Acad. Sci, USA. 95:6296-6301, 1998. PMID: 9600959

Caulin-Glaser, T., Farrell, W.J., Bunger, K., Zaret, B., Pfau, S.E., Setaro, J.F., Brennan, J.J., **Bender, J.R.**, Cleman, M.W., Cabin, H.S., Remetz, M.S.: Modulation of circulating adhesion molecules in postmenopausal women with coronary artery disease. J. Am. Coll. Cardiol. 31(7):1555-1560, 1998. PMID: 9626834

Collinge, M., Pardi, R., **Bender, J.R.**: Class II transactivator-independent endothelial cell MHC class II gene activation induced by lymphocyte adhesion. J. Immunol. 161:1589-1593, 1998. PMID: 9712019

Cuff, C.A., Schwartz, J., Bergman, C.M., Russell, K., **Bender, J.R.**, Ruddle, N.H.: Lymphotoxin- induces chemokines and adhesion molecules: Insight into the role of Lt in inflammation and lymphoid organ development. J. Immunol. 161:6853-6860, 1998. PMID: 9862717

Chen, Y., Ayalon, A., **Bender, J.R.**, Garen, A.: Specific lysis of human melanoma cells by natural killer cells and complement, mediated by immunoconjugates containing a single-chain Fv targeting domain conjugated to the Fc effector domain of human IgG1. Proc. Natl. Acad. Sci., USA. 96(4):1627-1632, 1999. PMCID: PMC15540

Liu, Y.C., Pan, J., Zhang, C., Fan, W., Collinge, M., **Bender, J.R.**, Weissman, S.M.: A MHC-encoded ubiquitin-like protein (FAT10) binds noncovalently to the spindle assembly checkpoint protein MAD2. Proc. Natl. Acad. Sci, USA. 96:4313-4318, 1999. PMID: 10200259

Geginat, J., Bossi, G., **Bender, J.R.**, Pardi, R.: Anchorage dependence of mitogen-induced G1 to S transition in primary T lymphocytes, J. Immunol. 162:5085-5093, 1999. PMID: 10227977

Russell, K.S., Stern, D.F., Polverini, P.J., **Bender, J.R.**: Neuregulin activation of ErbB receptors in vascular endothelium leads to angiogenesis. Am. J. Physiol., 277: H2205-2211, 1999. PMID: 10600838

Fabbri, M., Fumagalli, L., Bossi, G., Bianchi, E., **Bender, J.R.**, Pardi, R.: A tyrosine-based sorting signal in the beta-2 integrin cytoplasmic domain mediates its recycling to the plasma membrane and is required for ligand-supported migration. EMBO J., 18:4915-4925, 1999. PMID: 10487744

Russell, K.S., Haynes, M.P., Caulin-Glaser, T., Rosneck, J., Sessa, W.C., **Bender, J.R**.: Estrogen stimulates heat shock protein 90 binding to endothelial nitric oxide synthase in human vascular endothelial cells. J. Biol. Chem., 275:5026-5030, 2000. PMID: 10671543

Russell, K.S., Haynes, M.P., Sinha, D., Clerisme,E., **Bender, J.R**.: Human vascular endothelial cells contain membrane binding sites for estradiol, which mediate rapid intracellular signaling. Proc Natl Acad Sci., 97:5930-5935, 2000. PMID: 10823945

Sadeghi, M.M., Collinge, M., Pardi, R., **Bender, J.R.**: Simvastatin modulates cytokine-mediated endothelial cell adhesion molecule induction: involvement of an inhibitory G protein. J. Immunol., 165:2712-2718, 2000. PMID: 10946302

Geginat, J., Clissi, B., Moro, M., Dellabona, P., **Bender, J.R.**, Pardi, R.: CD28 and LFA-1 contribute to cyclosporin A-resistant T cell growth by stabilizing the IL-2 mRNA through distinct signaling pathways. Eur. J. Immunol., 30:1136-1144, 2000. PMID: 10760803

Haynes, M.P., Sinha, D., Russell, K.S., Collinge, M., Fulton, D., Morales-Ruiz, M., Sessa, W.C., **Bender, J.R.**: Membrane estrogen receptor engagement activates endothelial nitric oxide synthase via the P13-kinase-Akt pathway in human endothelial cells. Circ. Res. 87:677-682, 2000. PMID: 11029403

Zaret, B.L., Leppo, J.A., **Bender, J.R.**, Carrio, I., Eckelman, W.C., Gambhir, S., Green, A.M., Narula, J.:

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Sadeghi, M.M., Tiglio, A., Sadigh, K., O’Donnell, L., Collinge, M., Pardi, R., and **Bender, J.R.**: Inhibition of Interferon--Mediated Microvascular Endothelial Cell Major Histocompatibility Complex Class II Gene Activation by HMG-CoA Reductase Inhibitors, Transplantation. 70:1262-1268, 2001. PMID: 11397960

Snyder, E.L., O'Donnell, L., Dengler, T., Pomper. G.J., Velleca, M.A., Dincecco, D.M., Baril, L.L., Kyungyoon, M., Gudino, M., **Bender, J.R.**: *Ex vivo* evaluation of PBMNCs collected with a new cell separator. Transfusion. 41:940-949, 2001. PMID: 11452164

Conte, M.S., VanMeter, G.A., Akst, J.M., Clemons, T., Kashgarain, M., **Bender, J.R**.: Endothelial cell seeding influences lesion development following arterial injury in the cholesterol-fed rabbit. Cardiovasc. Res. 53:502-511, 2002. PMID: 11827702

Haynes, M.P., Li, L., Sinha, D, Russell, K.S. Collinge, M. , HisamotoK., Baron, R., Sessa, W., Bender, J.R. Src Kinase Mediates Phosphatidylinositol 3-kinase/Akt Dependent Rapid Endothelial Nitric Oxide Synthase Activation by Estrogen. J. Biol. Chem., 278:2118-2123, 2003. PMID: 12431978

Li, L., Haynes, M.P., **Bender, J.R**., Plasma Membrane Localization and Function of the Estrogen Receptor  Variant (ER46) in Human Endothelial Cells. Proc. Natl. Acad. Sci, USA., 100:4807-4812, 2003. PMID: 12431978

Sadeghi, M.M. Schechner, J.S., Krasilnikova, S., Gharaei, A.A., Kirkiles-Smith, N., Sinusas, A.J., Zaret, B.L., **Bender, J.R.**: Vascular cell adhesion molecule-1-targeted detection of endothelial activation in human microvasculature. Transplantation Proc., 36:1585-1591, 2004. PMID: 15251390

Sadeghi, M.M., Krassilnikova, S., Zhang, J., Gharaei, A.A., Luo, G., Kooshkabadi, A., Edwards, S., Yalamanchili, P., Harris, T.D., Sinusas, A.J., Zaret, B.L., **Bender, J.R**.: Detection of injury-induced proliferative process by targeting activated v3 integrin *in vivo*. Circulation, 110: 84-90, 2004. PMID: 15210600

Zhang, J., Krassilnikova, S., Gharaei, A.A., Fassaie, H.R., Esmailzadeh, L., Asadi, A., Edwards, D.S., Harris, T.D., Azure, M., Tellides, G., Sinusas, A., Zaret, B., **Bender, J.R.**, Sadeghi, M.: v3- targeted detection of arteriopathy in transplanted human coronary arteries: an autoradiographic study. FASEB J. 19:1857-1859, 2005. PMID: 16150802

Fabbri, M., Di Meglio, S., Gagliani, M.C., Consonni, E., Molteni, R., **Bender, J.R.**, Tacchetti, C., Pardi, R.: Dynamic partitioning into lipid rafts controls the endo-exocytic cycle of the l/2 integrin (LFA-1) during leukocyte chemotaxis. Mol Biol Cell. 116:5793-5803, 2005. PMID: 16207819

Wang, J., Collinge, M., Ramgolam, V. Ayalon, A., Xinhao, C.F., Pardi, R., Bender, J.R.: LFA-1-Dependent HuR Nuclear Export and Cytokine mRNA Stabilization in T Cell Activation.. J. Immunol. 176(4):2105-2113, 2006. PMID: 16455966

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Li, L., Hisamoto, K., Haynes, P., Bauer, P., Sanjay, A., Baron, R., Sessa, W.C., Bender, J.R.: Variant Estrogen Receptor -c-Src Molecular Interdependence and c-Src Structural Requirements for eNOS activation. Proc. Natl. Acad. Sci, USA, 104(42):16468-16473, 2007. PMID: 17921256

Savio, M., Rotondo, G., Rossetti, G., Bender, J.R., Pardi, R. A novel alternatively spliced constitutive photomorphogenic-1 (COP-1) product stabilizes UV stress-induced C-jun by inhibiting COP1. Oncogene, 27:2401-2411, 2008. PMID: 17968316

Panattoni, M., Sanvito, F., Basso, V., Bender, J.R., Doglioni, C., Casorati, G., Mondino, A., Pardi, R.: Targeted Inactivation Of the COP9 Signalsome Impairs Multiple Stages Of T Cell Development. J. Exp. Med., 205:465-477, 2008. PMID: 18268034

Guo, X., Nie, L, Esmailzadeh, L, Zhang, J, Bender, J.R., Sadeghi, M.M.: Endothelial and smooth muscle-derived neuropilin-like protein regulates platelet-derived growth factor signalling in human vascular smooth muscle cells by modulating receptor ubiquitination. J. Biol. Chem, 284(43):29376-82, 2009. PMID: 19696027

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Ramgolam V.S., DeGregorio S.D., Rao G.K., Collinge M, Subaran S, Markovic-Plese S, Pardi R, Bender J.R.: T cell LFA-1 engagement induces HuR-dependent cytokine mRNA stabilization through a Vav-1, Rac 1/2, p38MAPK and MKK3 signalling cascade. PLoS ONE: 5(12):e14450, 2010. PMID: 21206905

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**Editorials, Invited Reviews, Book Chapters, Books:**

**Bender, J.R.**: Idiopathic dilated cardiomyopathy: an immunologic disease, a genetic disease, an infectious disease, or all of the above? Circulation. 83(2):515-522, 1991. PMID: 1991387

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**Bender, J.R.:** A physician -scientist career: is it worth the effort? In: The Yale Guide to Careers in Medicine and the Health Professions. Ed. R. M. Donaldson, K.S. Lundgren, H.M. Spiro. Yale New Press, 2003.

Hisamoto, K., **Bender, J.R**.:Vascular Cell Signaling by Membrane Estrogen Receptors. Steroids, 70:382-387, 2005. PMID: 15862821

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Sadgehi, M.M., **Bender, J.R.:** Targeting v3 in vascular remodeling. Trends in Cardiovascular Medicine. 17:5-10, 2007. PMID: 17210471

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**Bender, J.R.**: Vascular cell signaling by membrane estrogen receptors. In: Henry, H., and Norman, A. (eds), The World of Hormones: Molecular and Physiological Insights, the Biomedical & Life Sciences Collection, Henry Stewart Talks, Ltd., London, 2007.

Kim, K.H., Moriarty, K., **Bender, J.R**.: Vascular Cell Signaling by Membrane Estrogen Receptors. Steroids 73:864-869, 2008. PMID: 18325557

Rao, G.K., **Bender, J.R.:** Rac, PAK and eNOS ACTion. Circ. Res., 103: 328-330, 2008. PMID: 18703782

Kim, K.H., **Bender, J.R.**: Membrane-initiated actions of estrogen on the endothelium. Mol. Cell. Endoc., 308,

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**Bender, J.R.,** Russell, K., Rosenfeld, L., Chaudry, S. (editors): Oxford American Handbook of Cardiology, Oxford Press, 2010.

Nkonde-Price, C., **Bender, J.R.**: Menopause and the Heart, in: Endocrinology and Metabolism Clinics of North America. Endocrinol. Metab. Clin. North. Am. Sep;44(3):559-64, 2015

**Abstracts: (available on request)**

**Selected Invited Lectures, Panel Participation and Meetings:**

The molecular bases of lymphocyte-endothelial cell interactions: An in vitro model for allograft rejection. San Raffaele Scientific Institute, University of Milan, April 18, 1988.

Mechanisms of lymphocyte-endothelial cell adhesion and cytotoxicity. Session Chairman. FASEB Summer Conference on Molecular Mechanisms of Bone Marrow Transplantation, Saxtons River, Vermont, July 16-21, 1989.

Antigen-specific recognition of the endothelium: models of immune mediated vascular injury. Interurban Club. New Haven, CT, March 19, 1990.

Unstable angina: mechanisms of ischemia and injury. UCLA Symposium, La Costa, California. December 6-9, 1990.

Thrombin-mediated activation of the endothelium. Conference on “Thrombosis and Thrombolysis,” Yale University, August 16-18, 1991.

Interaction of lymphocytes with endothelium in transplantation arteriosclerosis. International Society for Applied Vascular Biology. St. Louis, MO., November 5-8, 1992.

Molecular Mechanisms of Lymphocyte-Endothelial Cell Adhesion. Vanderbilt University, Nashville, TN., October 20-21, 1992.

Physiology of Thrombosis. Thrombosis, Thromboembolism, and Thrombolysis Symposium, Yale University. August 20-21, 1993.

Leukocyte-Endothelial Cell Adhesion: Integrin-cytoskeletal Interaction. NIH Symposium on the Role of Biological Response Modifiers in Molecular and Clinical Transfusion Medicine, Arlington, VA., September 9-10, 1993.

Effect of Estrogens on Leukocyte-Endothelial Cell Interactions. American Heart Association Scientific Sessions, Council on Circulation Colloquium, Dallas, TX., November 14, 1994.

Genetic Diversity of Endothelial Activation. Department of Medicine, McGill University, Montreal, Quebec, Canada, December 9, 1994.

Lymphocyte-Endothelial Cell Interactions: Models of Immune-Mediated Vascular Injury. Department of Medicine, Stanford University, February 8, 1996.

NK Cell-Endothelial Cell Interactions in Vascular Immunity. Department of Immunology, Pasteur Institute, Paris, February 23, 1996.

Endothelial Estrogen Receptors and their Regulation. ASPET Colloquium at Experimental Biology 1996. Washington DC, April 18, 1996.

Effects of Estrogen on Endothelial Activation. Blood Vessel Club at the Experimental Biology/American Association of Immunologists Meeting, New Orleans, LA., June 2, 1996.

Estrogen Effects on Nitric Oxide Synthases and Adhesion Molecules. Estrogen and the Blood Vessel Wall Symposium, 9th International Vascular Biology Meeting, Seattle, WA., September 3-4, 1996.

Regulation of Endothelial NOS by Estrogen. Nitric Oxide, Cytchromes P450 and Sexual Steroid Hormones Workshop, San Francisco, CA., October 9-11, 1996.

Moderator, Adhesive Glycoproteins in Vascular Biology Session, Intercouncil Working Group on Vascular Biology, American Heart Association 69th Scientific Sessions, November 10, 1996.

Endothelial Major Histocompatability Complex Gene Expression and Protein Function: Clues to Vascular Activation and Injury. Keystone Symposium on Immunologic Aspects of Cardiovascular Disease, Keystone, CO., January 20-26, 1997.

The Vascular Endothelium: Stimulator and Target of Immune Responses. NIH National Institute of Allergy and Infectious Diseases Workshop on Systemic Vasculitis: Future Research Directions. Bethesda, MD., September 15, 1997.

Adhesion-dependent Leukocyte-Endothelial Cell Activation. Department of Medicine, University of Pennsylvania, Philadelphia, PA., October 6, 1997.

Endothelial NOS Regulation by Estrogen. Division of Molecular Cardiology, Tufts University School of Medicine, Boston, MA., November 7, 1997.

Effects of Ovarian Hormones on Leukocyte-Endothelial Cell Interactions, Hormonal Influences on Vascular Inflammation and Immunity Symposium. Wake Forest University, Winston-Salem, NC., October 15, 1998.

Effects of Estrogen of Endothelial Activation. Cardiac Branch, NHLBI, Bethesda, MD., November 23, 1998.

Leukocyte-Endothelial Cell Interactions. Division of Cardiovascular Research, Pfizer Pharmaceuticals, Groton, CT., January 12, 1999.

Regulation of eNOS in the Endothelium. Novartis Advisory Board Meeting for the Development of Aromatase Inhibitors. New York, NY., January 23, 1999.

Effects of Estrogen on Nitric Oxide Release. NIH (NICHD) Symposium on Vasoactive Substances and Free Radicals in Prenatal Biology. Alexandria, VA., May 7, 1999.

Lymphocytes and Cytokines in Atherogenesis. American Association of Immunology (AAI) Symposium on Immunity in Atherosclerosis. Seattle, WA., May 15, 2000.

Imaging in Vascular Biology. American Society of Nuclear Cardiology. Bar Harbor, Maine, July 17, 2000.

Lymphocyte Adhesion Receptors and Endothelial Activation; Models of Inflammation and Immune Responses. Department of Medicine, NYU School of Medicine, July 27, 2000.

Effects of Estrogen on Vascular Inflammation. Graylyn Conference on Steroid Hormones in Cardiovascular Biology. Bowman Gray School of Medicine, Greensboro, North Carolina. October 13, 2000.

Inflammatory and Hormonal Effects on the Endothelium. Ohio State University School of Medicine, Columbus, Ohio. June 4, 2001.

Effects of Ovarian Steroid Hormones on Leukocyte Adhesion. In Estrogen and Inflammation Symposium, American Society of Physiology, Pittsburgh, PA. October 19, 2001.

Molecular Imaging of the Vasculature. Cambridge University, Cambridge, England. December 13, 2001.

Lymphocyte-mediated Endothelial Apoptosis. Cambridge University, Cambridge, England. December 13, 2001.

Cardiovascular Protective Effects of Estrogen. Association of University Cardiologists, Phoenix, Arizona. January 10, 2002.

Membrane Estrogen Receptors in Vascular Cells. FASEB Summer Conference on Membrane Steroid Hormone Receptors, Snow Mass, Colorado, June 2002.

Vascular Targets for Molecular Imaging. American Society of Nuclear Cardiology, Squaw Valley, California, July 16, 2002.

Vascular Structure and Function in Cardiovascular Inflammation. Symposium on Inflammation in Myocardial and Coronary Disease. University Hospital San Raffaele, Milan, Italy. October 9, 2002.

Vascular Cell Signaling, American Heart Association Scientific Sessions (Session Chairman), Chicago, Illinois, November 2002.

Immune, Inflammatory and Hormonal Effects on the Endothelium. Massachusetts General Hospital, Boston, Massachusetts. February 10, 2003.

Nongenomic Effects of Estrogen on the Vasculature. Experimental Biology, San Diego, California, April 13, 2003.

Cardiovascular Inflammation-New Approaches to Cardiac Screening. Primary Care Update Conference. Danbury, Connecticut. April 26, 2003.

Immune Responses in Cardiovascular Disease. NHLBI Symposium on Cardiovascular Outcomes in the Era of HAART. Herndon, Virginia, May 7, 2003.

Membrane Estrogen Receptors in Vascular Endothelial Cells. Third International Meeting on Rapid Responses to Steroid Hormones. Florence, Italy. September 13, 2003.

Cardiovascular Inflammation. University of Siena, Siena, Italy. September 15, 2003.

Hormonal Effects on the Endothelium. University of Siena, Siena, Italy. September 15, 2003.

Leukocyte-Endothelial Cell Interactions, University of Virginia, Charlottesville, Virginia. December 8, 2003.

Cardiovascular Inflammation. 40th Annual Robert M. Jeresaty Cardiovascular Symposium. Hartford, Connecticut. April 28, 2004.

Molecular Targets for Atherosclerosis Imaging. NIH Cardiovascular Molecular Imaging Symposium (Organizing Committee). Bethesda, Maryland. May 4, 2004.

Integration of Plasma Membrane- and Nuclear-initiated Signaling in Steroid Hormone Action. Session Chair, Vascular Biology. FASEB Summer Research Conference, Tucson, Arizona. July 31-August 05, 2004.

Inflammatory Cytokines and the Cardiovascular System. Workshop on Inflammation, Inflammatory Mediators and Aging. NIH (National Institute on Aging). Bethesda, Maryland. September 2, 2004.

Leukocyte Integrin-dependent Cytokine and Angiogenic Factor Gene Expression. Cambridge University, Cambridge, England. September 22, 2004.

Leukocyte Integrin Effects on Cytokine and Angiogenic Factor Gene Expression through RNA-protein interactions. Boehringer-Ingleheim Pharmaceutical, Ridgefield, Connecticut. October 29, 2004.

Hormone Replacement Therapy and Vascular Signaling: The Estrogen Conundrum. Cardiovascular Medicine Grand Rounds, Brigham and Women’s Hospital, Boston, Massachusetts. January 6, 2005.

Leukocyte Integrin-dependent Cytokine and Angiogenic Factor Gene Expression. Vascular Biology Seminar Series, Brigham and Women’s Hospital, Boston, Massachusetts. January 6, 2005.

Truncated vs. Full-length Estrogen Receptors and Rapid Vascular Responses. Co-organizer and Co-chairman,

4th International Meeting on Rapid Responses to Steroid Hormones, San Diego, California, March 28-30, 2005.

HRT and Vascular Cell Signaling: The Estrogen Conundrum. Frank N. Wilson Visiting Professor. University of Michigan, Ann Arbor, Michigan, May 9-10, 2005.

Integrin-dependent Cytokine and Angiogenic Factor Gene Expression: Relevance in Vascular Remodeling and Angiogenesis. Cardiovascular Research Seminar Series. Albert Einstein College of Medicine, Bronx, New York. May 25, 2005.

Membrane Estrogen Receptors in the Cardiovascular System. In Rapid Extranuclear Signaling Symposium, Endocrinology 2005. San Diego, California. June 4, 2005.

Endothelial Responses to Estrogen. University of Chicago, October 25, 2005.

Pathways for Damage to the Vasculature, 45th Annual Society of Toxicology Meeting. San Diego, California. March 8, 2006.

New approaches to Vascular Remodeling and Angiogenesis. Cardiology Grand Rounds, Tufts-New England Medical Center, Boston, Massachusetts, May 11, 2006.

Estrogen Receptor Variants and Vascular Responses. FASEB Summer Conference on Mechanisms of Action of Steriod Hormones; Integration of Membrane and Nucleus-initiated Effects. Conference Organizer and Co-Chairman. Tucson, Arizona, July 29-August 3, 2006.

Cytokine and Angiogenic Factor Gene Expression; relevance in vascular remodeling and angiogenesis. Cardiology Grand Rounds, University of Massachusetts Medical School, Worcester, Massachusetts. August 28, 2006.

Integrins and T cell Gene Expression. Vita-Salute San Raffaele University School of Medicine, Milan, Italy. September 6, 2006.

The Rac/p38 Pathway in Integrin-mediated Gene Expression. Cambridge-Yale Cardiovascular Research Program. Cambridge University, Cambridge, England. September 11, 2006.

Vascular Cell Signaling by Membrane Estrogen Receptors. NIH Strategic Planning Workshop on Regulation of Inflammatory Responses: Influence of Sex and Gender, Bethesda, Maryland, September 19, 2006.

Effect of HuR Gene Deletion in Vascular Pathology Models. Boerhinger Ingelheim, Ridgefield, Connecticut, May 9, 2007.

Membrane Estrogen Receptors in the Vascular System. 6th International Meeting on Rapid Responses to Steroid Hormones. Co-Organizer and Session Chairman. Dublin, Ireland, September 2-5, 2007.

Cytokine and Angiogenic Factor Gene Expression in Vascular Remodeling and Angiogenesis. Cardiology Grand Rounds, NYU School of Medicine, New York, NY. December 7, 2007.

The Role of Truncated ER in Mediated Vascular Effects. FASEB Summer Conference on Extra-nuclear Steroid Receptors: Integration with Multiple Signaling Pathways. Program Committee Member and Session Chairman, Carefree, Arizona, July 27-August 1, 2008.

Endothelial Membrane Estrogen Receptors: Splice Forms and Relevance in Cardiovascular Pathology. State-of-the-Art Presentation at the 35th Annual Meeting of the International Aldosterone Conference. Washington D.C., June 8, 2009.

Rapid Signaling through Vascular Cell Membrane Estrogen Receptors. Novel Estrogen Receptor Actions Symposium, at the Physiological Society International Meeting, Dublin, Ireland, July 8, 2009.

Hormone and Lipid Effects on Endothelial Activation, Endowed Lectureship, University of Colorado School of Medicine, Denver, Colorado, February 19, 2010.

Localization of Endothelial Membrane Estrogen Receptors, FASEB Summer Research Conference on the Physiology of Integrated Nuclear and Extranuclear Steroid Signaling. August 8-13, 2010.

Heart Disease in Women: Is it Different than in Men?, at the Health and Medicine for Women Symposium, Yale University, September 24, 2010.

Transmembrane Endothelial Estrogen Receptors. Rapid Responses to Steroid Hormones, Crete, Greece. September 15, 2011.

Leukocyte Integrin-dependent Gene Expression. Cardiovascular Research Institute Seminar, Morehouse School of Medicine, Atlanta, Georgia, May 9, 2013.

Signaling Surprises in Endothelial Membrane Estrogen Receptors, Speaker and Session Chair, Response to Steroid Hormones International Meeting, Erie, Pennsylvania, September 20, 2013.

Role of Macrophage Integrin-dependent signaling in Ischemia Arteriogenesis. Cardiology Grand Rounds, Columbia School of Medicine, New York, New York, December 3, 2013.

Leukocyte Integrin-dependent Modulation of Inflammatory Gene Expression in Vascular Pathology. Speaker, Session Chair and meeting organizer, 4th Annual NAVBO-Yale CVRC Symposium, Cardiovascular Inflammation and remodeling. New Haven, Connecticut, May 8-10, 2014.

Integrin-dependent Leukocyte Gene Expression in Vascular Remodeling and Angiogenesis. Keynote Lecture, International Cardiovascular 2016 Conference, Manchester England. August 1, 2016.

Effects of estrogen on vascular function and health: Controversies in hormone replacement therapy. Speaker, International Cardiovascular 2016 Conference, Manchester England. August 1, 2016.

Effects of Estrogen on the Arterial Wall: Clinical Implications. Speaker, Estrogen Therapy: Applying New Findings to Women’s Health Care. Yale University, September 30, 2016.

**Current and Recent Funding:**

1. CARIPLO Foundation Award. Title: Targeting Myeloid Cell Migration and Differentiation at Sites of Chronic Inflammation: Role of the Stress Activated Protein Kinase Network. Dates: 06/01/15-05/31/17. Total direct costs: $400,000. Co-PIs: J.R. Bender, Ruggero Pardi. (DIBIT, Milan, Italy).

2. Connecticut Biomedical Research Fund. Title: Macrophage integrin-modulated RNA stability in neovessel formation. Dates: 10/2015-9/2017. Total direct costs: $298,986. P.I.: J.R. Bender.

3. T32 HL07950, NIH (NHLBI). Title: Vascular Research Training. Dates 7/1/16-6/30/21. Total direct costs: $1,104,516. P.I. J.R. Bender

4. 1R21AI124116, NIH (NHLBI). Title: Modulation neuroinflammation through interference of cooperative microRNA-RNA-binding protein interactions. Dates 6/17/16-5/31/18. Total direct costs: $175,000. P.I. J.R. Bender

5. Sackler Foundation Award. Title: Vascular Inflammation in Atherosclerosis. Dates: 10/09-06/16. Total direct costs: $450,000. P.I.: J.R. Bender

6. R01 HL43331, NIH (NHLBI). Title: Molecular Models of Immune Mediated Vascular Injury. Dates 7/01/08-6/30/13. Total direct costs: $1,250,000. P.I. J.R. Bender

7. R01 HL61782, NIH (NHLBI). Title: Molecular Models of Estrogen-induced Vascular Protection. Dates 4/01/08-3/31/13. Total direct costs: $1,000,000 P.I. J.R. Bender

8. P01HL70295-01, NIH (NHLBI). Project 4 Title: An IFN--Integrin-Growth Factor Axis in GA Biomarker Development. Dates 9/01/06-08/31/11. Project total direct costs: $803,226. Project leader: J.R. Bender

In: Chronic DTH and IFN- in Human Graft Arteriosclerosis. P.I. J.S. Pober.

9. Kronos Longevity Research Institute. Kronos Early Estrogen Prevention Study (KEEPS). P.I. Hugh Taylor. Dates 02/06-02/12 – J.R. Bender Yale Co-Investigator and National Steering Committee Member.