

**CURRICULUM VITAE**  
**AYAD A. JAFFA, Ph.D.**

Business address: Department of Medicine  
Division of Endocrinology, Diabetes, Medical Genetics.  
Medical University of South Carolina  
114 Doughty Street  
Charleston, SC 29425  
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**Education:**

1975-1977: Brunel Technical College, Bristol, England, U.K.  
Advanced level science

1977-1980: University of Essex, Department of Chemistry, Wivenhoe Park, Colchester,  
England, U.K.  
B.Sc. (Honours) in Biological Chemistry

1980-1984: University of Essex, Department of Chemistry, Wivenhoe Park, Colchester,  
England, U.K.  
Ph.D. in Biological Chemistry

1984-1986: Postdoctoral Fellowship, Department of Medicine, Medical University of  
South Carolina, Charleston, South Carolina

**Academic Appointments:**

1986-1989: Research Associate, Department of Medicine, Medical  
University of South Carolina, Charleston, South Carolina

1989-1996: Assistant Professor of Medicine, Department of Medicine, Endocrinology-  
Diabetes-Metabolism Division, Medical University of South Carolina,  
Charleston, South Carolina

- 1990-1996: Assistant Professor of Pharmacology, Department of Cell and Molecular Pharmacology and Experimental Therapeutics, Medical University of South Carolina, Charleston, South Carolina
- 1991-present: Graduate faculty, Medical University of South Carolina, Charleston, South Carolina.
- 1996-2002: Associate Professor of Medicine, Department of Medicine, Endocrinology-Diabetes-Medical Genetics Division, Medical University of South Carolina.
- 1996-2002: Associate Professor of Pharmacology, Department of Cell and Molecular Pharmacology and Experimental Therapeutics, Medical University of South Carolina, Charleston, South Carolina
- 1999-2008 Tenure, College of Medicine, Medical University of South Carolina.
- 2002- Professor, Department of Medicine, Endocrinology-Diabetes-Medical Genetics, Medical University of South Carolina
- 2004- present Director, Research Training Program for Health Professionals
- 2005- 2008 Associate Vice Chair for Research, Department of Medicine, Medical University of South Carolina
- 2008- Present Adjunct Professor, Department of Medicine, Medical University of South Carolina
- 2008- Present Professor and Chair, Department of Biochemistry, American University of Beirut, Beirut, Lebanon

**Professional Societies:**

American Diabetes Association  
Fellow, Council for High Blood Pressure  
American Association for the Advancement of Science  
America Physiological society

**Honors and Awards:**

- 1990-1992: Research and Development Award: American Diabetes Association.
- 1992: John A. Colwell Award for Outstanding Contributions to Diabetes Research. American Diabetes Association, South Carolina Affiliate.

- 1995-2000 National Institutes of Health, FIRST Award.
- 1995: Henry Christian Award for Excellence in Research, American Federation for Clinical Research Foundation.
- 1996-2000: Board of Directors, Southern Region, American Diabetes Association.
- 1998-2001: Research Award, American Diabetes Association.
- 1999-2005 Scientific Advisory Board: Konishi-MUSC Institute for Inflammation Research
- 1998-2002 Secretary-General, 16<sup>th</sup>, International Congress on Kinins.
- 2002-Present Elected Fellow, Council for high blood pressure research
- 2002-present Member, Alliance for Cellular Signaling
- 2006-2007 MUSC Trustee Leadership Academic
- 2007-2009 VISN 7 Research Career Development Award (Senior Scientist)  
Department of Veterans Administration

**Administrative Experience and Committees:**

- 1992-1996: Executive member, fund raising committee, American Diabetes Association, South Carolina Affiliate.
- 1997-1999: Faculty Library Committee, AD Hoc Committee on Support for Research Excellence, Medical University of South Carolina.
- 1995-2001: Director, Research Seminar Series, Division of Endocrinology-Diabetes-Medical Genetics, Medical University of South Carolina
- 1997-Present: Strom Thurmond/Gazes Research Institute Operational Committee.
- 1997-2001: University Research Council, Medical University of South Carolina.
- 2000-2003 Advisory Board  
Coastal Cancer Control Advisory Committee
- 2000-2003 Member, International Affairs Committee

2003-2005	Faculty Senate, Medical University of South Carolina
2003-2004	Member, Search Committee for Division Director of Endocrinology- Diabetes-Medical Genetics, Department of Medicine, MUSC
2005-2008	Scientific Advisory Committee General Clinical Research Committee
2006-2008	Promotions and Tenure Committee Department of Medicine
2006- 2008	Member, Search Committee for Division Director of Infectious Diseases, Department of Medicine, MUSC
2006- 2008	Co-Chair, Faculty Development and Mentoring Committee Department of Medicine
2006- 2008	Co-Chair, Department of Medicine Study Section
2006- 2008	Chair, Department of Medicine Research Day
2008- Present	Chair, Ph.D. Task Force Committee
2008- Present	Academic Committee, Faculty of Medicine

## **RESEARCH SUPPORT:**

### **CURRENT FUNDING**

1. 1 RO1 HL077192-01 (Jaffa-PI)  
NHLBI (priority score 1.52, 4.3 percentile)  
Lipoproteins, CTGF and Diabetic Vascular & Renal Disease  
02/01/06 – 01/30/11  
total costs: \$1,804,300
2. 1 R01 HL087986-01 (Jaffa-PI)  
NIH/NHLBI (priority score 1.4, 7.4 percentile)  
Kallikrein and Vascular Disease Risk in Diabetes  
Ayad A Jaffa, PI  
07/01/08 – 06/30/13  
Total costs: \$1,804,300

3. 5 T35 DK007431-21 (Jaffa-PI)  
NIDDK  
Ayad A Jaffa, PI  
Short Term Training in Health Professional Schools  
Total Costs: \$745,798  
05/01/05 - 04/30/10
  
4. VA BLRB Merit (Lopes-Virella-PI)  
Ayad A Jaffa Co-Investigator 5% effort  
Veterans Affairs  
Lipoprotein Metabolism and Cell Lipoprotein Interactions in Diabetes Mellitus  
04/01/07 – 03/31/11

**PENDING**

1. 1 R01 DK081575-01 (Jaffa-PI)  
NIH/NIDDK  
Kinins and AT2 receptors in hypertension and renal injury  
Ayad A Jaffa, PI  
12/01/09 – 11/30/14  
Total costs: \$1,837,074
  
2. Administrative Supplement  
NOT-OD-09-056  
1 RO1 HL077192-01 (Jaffa-PI))  
NHLBI  
Lipoproteins, CTGF and Diabetic Vascular & Renal Disease  
05/01/2009 – 04/30/2011  
Total costs: \$253,131
  
2. F30, NIH (Wilson P-PI)  
Ayad A Jaffa Mentor  
NIH/NIDDK  
Mechanisms of diabetic nephropathy: The involvement of kinin and angiotensin receptor heterodimerization  
04/07/09 – 03/31/14

## PAST FUNDING

1. 5RO1 DK46543-11 (Jaffa-PI)  
NIH, NIDDK  
Kinins Role in mesangial cell fibrosis  
5/01/01-4/30/07  
Total costs: \$1,308,263
  
2. 5 PO1 HL55782-10 (Virella)  
NHLBI  
Ayad A Jaffa, Co-PI  
Markers and Mechanisms of Macrovascular Disease in IDDM  
Total Costs \$: 9,510,942  
09/01/01-08/30/07
  
3. Project 3 (Jaffa)  
Kallikrein and Kinins in Diabetic vascular Disease  
Project Leader  
Total costs: \$1,608,750  
09/01/01-08/30/07
  
4. Molecular and Statistical Genetics Core  
Ayad A Jaffa, Co-PI  
Total Costs: \$385-960  
09/01/01-08/30/06
  
5. RO1 HL71255-01 (Jaffa)  
NHLBI  
Kallikrein-Kinins and Diabetic Vascular Complications  
Ayad A Jaffa, PI  
07/01/02-06/30/03  
total costs: \$1,608,750
  
6. Nippon-Zoki Pharmaceutical Company  
Ayad A Jaffa, PI  
Effects of NZ-419 on vascular and renal biology  
total Costs: \$72,570  
04/01/02 – 07/01/03
  
7. Merit Review  
Veterans Administration

- Kallikrein-kinin system in renal function and disease  
Ronald K Mayfield, PI  
Ayad A Jaffa, Co-PI,  
Total costs: \$601,225  
10/01/98 – 09/30/03
8. R 43 GM64048-01  
Thrombostatin Prevents LPS-Induced Shock  
Thomas A Morinelli, PI  
Ayad A Jaffa, PI subcontract  
Total costs: \$99,999  
10/01/01-9/30/02
9. Research Award (PI: Jaffa)  
American Diabetes Association  
Kinin Receptors in vascular injury and remodeling. Influence of diabetes and hyperglycemia.  
Ayad A Jaffa, PI  
Total costs: \$222,720  
07/01/98-12/30/02
10. MUSC- Interim Funding  
Mechanisms of diabetic Glomerular Injury  
Ayad A Jaffa, PI  
total costs: \$50,000  
07/01/00-06/30/03
11. Juvenile Diabetes Foundation International  
Effects of kinins, glucose and modified lipoproteins on matrix formation in mesangial cells.  
Mentor for Victoria Velarde,  
Total Costs. \$60,000.  
1997-1999
12. American Society of Nephrology  
Ayad A Jaffa, PI  
Kinins and mesangial cell proliferation  
total project costs: \$62,500  
04/01/98-03/30/03
13. American Diabetes Association (PI: Jaffa)  
Research Award

- Kinins Role in Mesangial Cell Proliferation  
Ayad A. Jaffa, PI  
Total costs \$53,950  
1995-1997
14. 1 R0 1DK 46543 (Jaffa: PI)  
National Institute of Health  
Kinins Role in Mesangial Cell Proliferation  
Ayad A. Jaffa, PI.  
Total costs \$503,780  
1995-2000.
15. American Diabetes Association (Jaffa:PI)  
Research and Development Award  
"Kallikrein and Kinins in the Diabetic Kidney"  
Ayad A. Jaffa, PI, \$194,621,  
1990-1992
16. Medical University of South Carolina Clinical Fellowships Research Award  
Preceptor for Carolyn Venable, M.D.  
"Modulation of renal kallikrein-kinin system by dietary protein".  
Total costs \$20,000  
1992-1993
17. Veterans Administration  
Kallikrein-kinin System in Renal Function and Disease.  
Ronald K. Mayfield, PI  
Ayad A. Jaffa, Co-PI.  
Total costs \$472,000.  
1993-1998
18. Medical University of South Carolina Research Fellowships Awards  
Preceptor for Victoria Velarde, Ph.D.  
"Signal transduction via the B<sub>2</sub>-kinin receptors"  
Total costs \$45,000  
1995-1997.
19. National Kidney Foundation of South Carolina  
Kinins Role in the Development of Diabetic Glomerulosclerosis  
Preceptor for Victoria Velarde  
1996-1997
20. Medical University of South Carolina Institutional Research Funds  
"Hormonal Regulation of Renal Kallikrein and Renin Gene Expression"

Ayad A. Jaffa, PI, \$19,187  
1991-1992

**Research Interests:**

- Biomarkers of diabetic complications
- Pathogenesis of diabetic nephropathy
- Mechanisms of progressive renal disease
- Mechanisms of vascular dysfunction
- Growth factors and signal transduction mechanisms
- Vascular injury and remodeling mechanisms
- Kinin receptors expression, function and genetic mutations
- Genetics of diabetic vascular and renal complications
- Cross-talk between G-protein coupled receptors and tyrosine kinase receptors
- MAP kinases and EGF receptor transactivation

**Selected Invited Meetings and Special Lectures:**

1. Gordon Research Conference: Kallikreins and kinins. Oxnard, California. Presentation: Renal kallikrein abnormalities and their relation to altered renal function in streptozotocin diabetes, 1986.
2. Gordon Research Conference: Kallikreins and Kinins. Oxnard, California, February 13-17, 1989. Presentation: Effects of a kallikrein inhibitor and a kinin receptor antagonist on aminoacid-induced renal hyperperfusion
3. Gordon Research Conference: Kallikreins and Kinins. Ventura, California, February 18-22, 1991. Presentation: Renal kallikrein gene expression in diabetes and its regulation by insulin.
4. Gordon Research Conference: Kallikrein and Kinins. Ventura, California, February 22-26, 1993. Presentation: Insulin-like growth factor 1 (IGF-1) produces renal hyperfiltration by a kinin-mediated mechanism.
5. First International Symposium "Significance of Autocrine and Paracrine Signaling for Energy Metabolism in Contracting Skeletal and Cardiac Muscle Tissue". Buhl, Germany, September 3-4, 1994. "Presentations: Kinins Induce Vascular Smooth Muscle Cell Proliferation".

6. Gordon Research Conference: Kallikreins and Kinins, Ventura, California, February 5-9, 1995. Presentation: Signal Transduction via the B<sub>2</sub>-kinin receptor.
7. 55th Annual Meeting of the American Federation for Clinical Research, San Diego, California, May 5-8, 1995. Presentation: "Taxol Inhibits Bradykinin-Induced MAPkinase Nuclear Translocation in Vascular Smooth Muscle Cells".
8. Visiting professor, Catholic University of Chile, Santiago, March 5-24, 1996. Presentations:  
"Kallikrein, kinins and diabetic vascular disease."  
"Regulation of Renal Kallikrein Gene Expression by IGF-1"
9. Institute of Medicine and Genetics, Medical College of Georgia, Augusta, Georgia. May 30<sup>th</sup>, 1996. Presentation: "Role of bradykinin in vascular smooth muscle cell proliferation and matrix formation".
10. Department of Medicine, American University of Beirut, Lebanon, September 9, 1996. Presentation: The role of the kallikrein-kinin system in renal disease.
11. Institute of Internal Medicine, University of Florence, Florence, Italy. May 2<sup>nd</sup>, 1997. Presentation "B<sub>2</sub>-kinin receptors in vascular injury and remodeling".
12. Vascular Biology and Hypertension Research Symposium. Destin, Florida, September 25-28, 1997. Presentation "Signaling through the B<sub>2</sub>-kinin Receptors in Vascular Smooth Muscle Cells.
13. New York Medical College, Department of Pharmacology, Valhalla, New York, December 8<sup>th</sup>, 1997. Presentation: Mechanisms of MAPK activation by bradykinin in vascular smooth muscle cells.
14. Cardiovascular Diseases and Kallikrein-Kinin System. Satellite Symposium of the International Conference on Kinins. Sapporo, Japan. October 26-27, 1998. Presentation "Cellular Actions of kinins in Diabetic Nephropathy".
15. University of Charleston, Department of Biology, Charleston, SC. November 16, 1998. Presentation "Activation of mitogenic pathways through the Bradykinin receptor".

16. Gordon Research Conference, Kallikrein and kinins, Ventura, California, January 17-22<sup>nd</sup>, 1999. Presentation: "Influence of the diabetic state on the signal transduction pathway through the B<sub>2</sub>-kinin receptor".
17. Molecular and Cellular Biology Program, Medical University of South, May 19<sup>th</sup>, 1999. Carolina. Presentation: Cellualr actions of kinins in the vessel wall.
18. Konishi-MUSC Institute for Inflammation Research, Osaka, Japan, March 29-30, 2001. Presentation:Effect of NZ-419 on kinin signaling in vascular smooth muscle cells.
19. College of Graduate Studies Seminar Series "Important Unanswered Questions in the Biomedical Sciences", October 23<sup>rd</sup>, 2001. Presentation: Kallikrein/Kinin System in health and disease.
20. 16<sup>th</sup>, International Congress on Kinins, Charleston, SC, May 26-30<sup>th</sup>, 2002. Presentation: Regulation of kinins receptors by angiotensin II in vascular smooth muscle cells.
21. New York Medical College, Department of Pharmacology, Valhalla, New York, June 19<sup>th</sup>, 2002. Presentation: Kallikrein, Kinins and Diabetic Vascular Complications.
22. FibroGen, Inc., South San Francisco, Ca, March 13-14, 2003. Presentation: Kallikreins, Kinins, Growth Factors and Diabetic Complications.
23. The Ervin G. Erdos, MD. Symposium, Novel Actions of Cardiovascular Mediators, University of Illinois at Chicago, Octobe5r 21, 2005.

**Editorial Activities:**

Manuscript Reviewer:

American Journal of Physiology  
Kidney International  
Life Sciences  
The Journal of Pharmacology and Experimental  
Therapeutics  
Diabetes  
Biochemical Pharmacology  
Journal of Cellular Physiology  
Canadian Journal of Physiology  
Peptides  
Hypertension  
Journal of Hypertension

**Guest Editor:** International Immunopharmacology  
The Proceedings of the sixteenth International Conference on  
The Kallikrein-Kinin System (2002).

**Grant Reviewer:**

NIH, Ad hoc reviewer for General Medicine B Study Section.  
Medical University Research Committee grants  
Veterans Administration  
American Diabetes Association, Grant Review Panel, 1999-2004.  
NIH Study Section Member,  
Clinical Cardiovascular Study Section, 2002-2004  
Philip Morris External Research Program, 2004-2005  
Endocrine Fellows Foundation  
NIDDK  
Special Panel ZDK1 GRB July 2006  
Special Panel ZDK1 GRB-7 (J2) November 14, 2006

**Patents**

Patent #: 6,071,710  
Date of issue: June 6, 2000  
Antikinin compounds and uses thereof

Patent #: WO 2006/122043 A2  
Date Of issue: 11/16/2006  
Diagnostic marker for diabetic vascular complications

**Provisional Filed Patents**

MUSC-FRD #P0917  
New Biomarker for Diabetic Kidney Disease

MUSC-FRD #P0918  
New Biomarker for Diabetic vascular Disease

**Graduate and Postdoctoral Fellows supervised:**

Carolyn Venable, M.D.	1992 - 1993
Eichiro Tashiro, M.D.	1992 - 1993

Michelle Nobles, B.S.C.	6/93 - 8/93
Amy Murray, B.S.C.	7/96 - 9/96
Padmavathy S. Naidu, Ph.D.	4/95 - 4/97
Victoria Velarde, Ph.D.	1995 –1999
Da Zhang, MD.	1998-1999
Mathew Beasey, MD	1998-2000
Shayla M Bergmann, MD	1999-2003
Jeremy Soule, M.D.	1999-2001
Julie Christopher, Ph.D.	1997- 2002
Christelle Douillet, Ph.D.	1998-2001
Yan Tan, M.D.	2001-2007
Wang Bing, MD, Ph.D.	2002-2007
Mimi Sohn, MD	2002-2005
Joo-Seob keum, M.D.	2002-2005
Chang Ho, MD	2004-2005

**MD/Ph.D. Students**

Rany Abdallah, Ph.D.	2006-2009
Parker Wilson	2007-Present

**Mentor**

Monika Gooz, MD, Ph.D. 2007-Present  
Assistant Professor of Medicine  
Nephrology Division  
MUSC

Hesham El-Shewy, Ph.D. 2007-Present  
Assistant Professor of Medicine  
Endocrinology Division  
MUSC

**PUBLICATIONS**

1. **Jaffa, AA.** Studies on the role of the kallikrein-kinin system in experimental diabetes. Ph.D. thesis 1984.
2. **Jaffa, AA,** Z Rashid, J Pratt, A Ashford and GS Bailey. A quantitative study of the levels of glandular kallikrein in normal and diabetic rats. *Biochemical Medicine* 31, 42-46, 1984.
3. **Jaffa, AA,** J Pratt, A Ashford and GS Bailey. A time-course study of submandibular kallikrein, blood glucose and insulin of alloxan-diabetic and streptozotocin-diabetic rats. *Agents and Actions*, 15, 478-481, 1984.
4. **Jaffa, AA,** J Pratt, A Ashford and GS Bailey. Studies of the effects of insulin, bradykinin and Captopril on blood glucose levels of alloxan diabetic rats. *Advances in Experimental Medicine and Biology*. 198B, 373-378, 1986.
5. **Jaffa, AA,** J Pratt, A Ashford and GS Bailey. A study of glandular kallikrein in diabetes. *Advances in Experimental Medicine and Biology*. 198B, 367-371, 1986.

6. **Jaffa, AA**, M Hussain, Z Rashid and GS Bailey. A comparative study of prokallikreins and kallikreins from rat pancreatic tissue and juice. *Advances in Experimental Medicine and Biology*. 198A, 323-327, 1986.
7. **Jaffa, AA**, DH Miller, GS Bailey, J Chao, HS Margolius and RK Mayfield. Abnormal regulation of renal kallikrein in experimental diabetes: Effects of insulin on prokallikrein synthesis and activation. *J Clin Invest*. 80(6):1651-1659, 1987.
8. Harvey, JN, **Jaffa AA**, BC Loadholt, RK Mayfield. Measurement of glomerular filtration rate and renal plasma flow in the diabetic rat by the single-injection isotopic technique: Effects of altered distribution volumes of <sup>51</sup>Cr-EDTA and <sup>125</sup>I-hippuran. *Diabetes Research*, 9:67-72, 1988.
9. **Jaffa, AA**, DH Miller, HS Margolius, RK Mayfield. The effects of diabetes and insulin on colonic tissue kallikrein. *Adv. Exp. Med. Biol.* 247B:669-673, 1989.
10. Mayfield, RK, DA Sens, **Jaffa AA**, HS Margolius. Studies of sweat kallikrein in normal human subjects. *Adv. Exp. Med. Biol.* 247B:649-655, 1989.
11. **Jaffa, AA**, JN Harvey, HS Margolius, RK Mayfield. Renal kallikrein response to dietary protein: A possible mediator of hyperfiltration. *Kidney International*, 36:1003-1010, 1989.
12. Bolin, P, **Jaffa AA**, PF Rust, RK Mayfield. Acute and chronic responses of human renal kallikrein and kinins to dietary protein. *Am J Physiol.*, 257:F718-F723, 1989.
13. **Jaffa, AA**, DH Miller, RH Silva, HS Margolius, RK Mayfield. The regulation of renal kallikrein synthesis and activation by glucocorticoid. *Kidney International*, 38:212-219, 1990.
14. Harvey, JN, **Jaffa AA**, HS Margolius, RK Mayfield. Renal kallikrein and the hemodynamic abnormalities of the diabetic kidney. *Diabetes* 39:299-304, 1990.
15. Mayfield, RK, **Jaffa AA**, AW Edmundson and JN Harvey. Tissue kallikrein and kinins in mediating the renal hemodynamic responses to diabetes mellitus and dietary protein. *Diabetes* 1991. H. Rifkin, J.A. Colwell and S.I. Taylor editors. p 184-188, 1991.
16. Harvey, JN, AW Edmundson, **Jaffa AA**, LL Martin, RK Mayfield. Renal excretion of kallikrein and eicosanoids in patients with Type I diabetes mellitus. Relationship to glomerular and tubular function. *Diabetologia* 35:857-862, 1992.
17. **Jaffa, AA**, KX Chai, J Chao, L Chao, RK Mayfield. Effects of diabetes and insulin on expression of kallikrein and renin genes in the kidney. *Kidney International*. 47:789-795, 1992.
18. **Jaffa, AA**, CP Vio, RH Silva, RJ Vavrek, JM Stewart, PF Rust, RK Mayfield. Evidence for renal kinins as a mediator of aminoacid-induced hyperperfusion and hyperfiltration in the rat. *J Clin Invest*. 89:1460-1468, 1992.
19. Matucci-Cerinic M, **Jaffa AA** and B. Kahaleh. Angiotensin converting enzyme: an in vivo and in vitro marker of endothelial injury. *J Lab Clin Med*. 120: 428-433, 1992.
20. Mayfield RK, **Jaffa AA**, AW Edmundson, and JN Harvey. Renal hyperfiltration states: Relationship to kallikrein and kinins. *Recent progress in kinins. Agents and Actions Supplement Vol 38*:111, 142-148, 1992.
21. Siragy HM, **Jaffa AA** and HS Margolius. Stimulation of renal interstitial kinins by sodium depletion. *Am J Hypertension* 6:863-866, 1993.

22. Morinelli, TA, GE Temple, **Jaffa AA**, RH Silva, M Naka, W Folger and PV Halushka. Thromboxane A<sub>2</sub>/Prostaglandin H<sub>2</sub> receptors in streptozotocin-induced diabetes: Effects of insulin therapy in the rat. *Prostaglandins*. 45:427-438, 1993.
23. Hutchinson, FN, SK Webster and **Jaffa AA**. Altered renal kallikrein and renin gene expression in nephrotic rats and modulation by converting enzyme inhibition. *J Clin Invest*. 92:1073-1079, 1993.
24. **Jaffa, AA**, D LeRoith, CT Roberts, PF Rust, RK Mayfield. Insulin-like growth factor I (IGF-1) produces renal hyperfiltration by a kinin-mediated mechanism. *Am J Physiol*. 266:F102-F107, 1994.
25. Siragy, HM, MM Ibrahim, **Jaffa AA**, RK Mayfield, H.S. Margolius. Sodium intake alters renal interstitial bradykinin, Prostaglandin-E<sub>2</sub> and cGMP. *Hypertension* 23:1068-1070, 1994.
26. **Jaffa, AA**, PF Rust, RK Mayfield. Kinin: A mediator of diabetes-induced glomerular hyperfiltration. *Diabetes* 44:156-160, 1995.
27. **Jaffa, AA**, RH Silva, B Kim, RK Mayfield. Modulation of renal kallikrein production by dietary protein in streptozotocin-diabetic rats. *J Am Soc Nephrol*. 7:721-727, 1996.
28. Mayfield RK, and **Jaffa AA**. Skeletal muscle kallikrein. Potential role in metabolic regulation. *Diabetes* 45 Suppl. 1:S20-S23, 1996.
29. Siragy, HM, **Jaffa AA**, HS Margolius, RM Carey. The renin-angiotensin system modulates renal bradykinin production. *Am J Physiol* 271:R1090-R1095, 1996.
30. Fitzgibbon, WR, **Jaffa AA**, RK Mayfield and DW Ploth. Role of kinins in the renal responses to Enalaprilat in normotensive and hypertensive rats. *Hypertension* 27:235-244, 1996.
31. Siragy HM, **Jaffa AA**, and HS Margolius. Bradykinin B<sub>2</sub>-receptor modulates renal prostaglandin E<sub>2</sub> and nitric oxide. *Hypertension* 29:757-762, 1997.
32. Morinelli, TA, EL Finley, **Jaffa AA**, DT Kurtz, ME Ullian. Tyrosine phosphorylation of phosphatidylinositol 3-kinase and the TP receptor by TXA mimetic 1-BOP, in A7r5 cells. *Biochemical Pharmacology* 53:1823-1832, 1997.
33. **Jaffa AA**, B Miller, SA Rosenzweig, RK Mayfield. Bradykinin induces tubulin phosphorylation and MAP kinase nuclear translocation in mesangial cells. *Am J Physiol* 273: F 916-F924, 1997.
34. **Jaffa AA**, VP Vio, V Velarde, D. LeRoith, RK Mayfield. Renal kallikrein and renin mRNA levels in diabetes, and their induction by insulin and insulin-like growth factor I (IGF-1). *Diabetes* 46: 2049-2056, 1997.
35. Vio, C.P., E Oestreicher, V Velarde, RK Mayfield, and **Jaffa AA**. Distribution of exogenous aprotinin in the rat kidney: colocalization with kallikreins in connecting tubules. *Biological Chemistry* 379:1271-1277, 1998.
36. Lu G, KE Meier, **AA Jaffa**, SA Rosenzweig, BM Egan. Oleic acid and angiotensin II induce a synergistic mitogenic response in vascular smooth muscle cells *Hypertension* 31:978-985, 1998.
37. Willi S, D O, rear, W Garvey, J Colwell, M Buse, **AA Jaffa**, M Lopes-Virella, D Wood, R Mayfield, P Wallace, K Hermayer, A Jenkins, T Lyons E Mayer-Davis. Diabetes Research in South Carolina: Past, Present and Future. *The Journal of the South Carolina Medical Association*. 94:502-509, 1998.

38. Velarde V, ME Ullian, TA Morinelli, RK Mayfield and **AA Jaffa**. Mechanisms of MAPK activation by bradykinin in vascular smooth muscle cells. *Am J Physiol* 277:C253-C261, 1999.
39. Naidu P, V Velarde, C Kappler, R Young, RK Mayfield and **AA Jaffa**. Calcium and calmodulin mediate bradykinin-induced MAPK phosphorylation and c-fos induction in vascular smooth muscle cells. *Am J Physiol*. 277: H1061-H1068, 1999.
40. Huang Y, **AA Jaffa**, S Koskinen, A Takei, MF Lopes-Virella. Oxidized LDL-containing immune complexes induce Fc receptor 1-MAPK activation in THP-1 macrophages. *Arterio Throm Vas Biol*. 19:1600-1607, 1999.
41. Jenkins AJ, V Velarde, KC Joyce, K Dan Philips, RK Mayfield, TJ Lyons and **AA Jaffa**. Native and modified low density lipoproteins activate extracellular-regulated kinases in mesangial cells. *Diabetes* 49:2160-2169, 2000.
42. Greene E, Velarde V and **AA Jaffa**. Role of oxidative stress and reactive oxygen species in bradykinin-induced MAPK and c-fos induction in vascular smooth muscle cells. *Hypertension* 35:942-947, 2000.
43. Christopher J, V Velarde, and **AA Jaffa**. Induction of B1-kinin receptors in vascular smooth muscle cells. Cellular mechanisms of MAPK activation. *Hypertension* 38:602-605, 2001.
44. Velarde V, A Jenkins, J Christopher, T Lyons, and **AA Jaffa**. Activation of MAPK by modified low-density lipoproteins in vascular smooth muscle cells. Role of calcium/calmodulin pathway and cytoplasmic kinases. *J Appl Physiol*, 91:1412-1420, 2001.
45. Douillet C, Velarde V, Christopher JT, Mayfield RK, Trojanowska, M and **AA Jaffa**. Mechanisms through which bradykinin promotes fibrosis in vascular smooth muscle cells: Role of TGF- and MAPK. *Am J Physiol* 279:H2829-H2837, 2000.
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### **Manuscripts in Preparation (ready for submission)**

1. Keum J and **Jaffa AA**. Novel Mechanisms of Plasma Prekallikrein activation by Vascular Smooth Muscle Cells (to be submitted to AJP-Heart)
2. ElShewy H, Sohn M, Tan Y, Hammad S, Klein R, Obeid LM, Luttrell LM, , **Jaffa AA**. LDL-stimulates CTGF via trans-activation of EDG receptors in mesangial cells (to be submitted to JBC).
3. Wang B, Carter R, Yim E, Lackland D, Luttrell LM, Lopes-Virella M, **Jaffa AA**. The DCCT/EDIC Study Group. Genetic variants in the coding region of the plasma prekallikrein gene and susceptibility to nephropathy in type 1 diabetic patients (To be submitted to diabetes).
4. Douillet C, Christopher J, **Jaffa AA**. Role of Rho-family GTPases in Bradykinin-induced matrix formation in vascular cells. In Preparation.
5. Abdallah R, Keum J, Goz M, Bing W, Luttrell D, Luttrell LM, **Jaffa AA**. Novel actions of plasma prekallikrein on vascular cells. Implications to diabetic vascular complications (to be submitted to JBC).

### **SELECTED PRESENTATIONS AND ABSTRACTS:**

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