

## **CURRICULUM VITAE: Michael Eric Ullian, M.D.**

### **CONTACT INFORMATION**

Medical University of South Carolina (MUSC)  
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### **EDUCATION**

A.B. (Biology), Harvard College, Cambridge, MA  
(1973-1977)  
M.D. (Medicine), New York University Medical School, New York, NY  
(1977-1981)

### **POST-DOCTORAL TRAINING**

Internal Medicine Residency, Bellevue Hospital-New York University, New York, NY  
(1981-1984)  
Nephrology Research Fellowship, New York University Medical School, New York, NY  
(1984-1985)  
Nephrology Clinical Fellowship, University Colorado Health Sciences Center, Denver, CO  
(1985-1986)  
Nephrology Research Fellowship, University Colorado Health Sciences Center, Denver, CO  
(1987-1989)

### **FACULTY POSITIONS**

Instructor in Medicine, Division of Nephrology, University Colorado Health Sciences Center,  
Denver, CO (1988-1989)  
Assistant Professor of Medicine, Division of Nephrology, MUSC, Charleston, SC  
(1989-1996)  
Associate Professor of Medicine, Division of Nephrology, MUSC, Charleston, SC  
(1996-2003)  
Professor of Medicine, Division of Nephrology, MUSC, Charleston, SC  
(2003-2005)  
Professor of Medicine with Tenure, Division of Nephrology, MUSC, Charleston, SC  
(2005-present)  
Associate Member, Graduate Faculty, MUSC, Charleston, SC  
(2006-present)

### **HONORS AND AWARDS**

Harvard College, 1973-1977:

-Cum Laude in Biology

-Honors Program in Biology

-Dean's List

-Harvard Scholarship Award,

Alpha Omega Alpha Honor Society, New York University Medical School, 1981

Fellow, Council for High Blood Pressure Research, American Heart Association, 1996

Visiting professor, Division of Nephrology, Emory University, 2003

Silver Heart Member, American Heart Association, 2004

Recognition for service, Continuing Medical Education Office, MUSC, 2005

Best Doctors, 2005

## GRANT AWARDS

Agency: National Institutes of Health

Duration: 1987-1989

Type: National Research Service Award Fellowship (DK08064)

Title: Ang II receptor kinetics of K depleted cells in culture

PI: Michael E. Ullian

Mentor: Stuart L. Linas

Total Award: \$66,000

Agency: National Kidney Foundation

Duration: 1991-1993

Type: Young Investigator Award

Title: Effect of fish oil on angiotensin II action in cultured vascular smooth muscle cells

PI: Michael E. Ullian

Total Award: \$40,000

Agency: American Heart Association, South Carolina Affiliate

Duration: 1994-1996

Type: Grant-in-Aid

Title: Vasoconstrictor action in a rat strain resistant to mineralocorticoid hypertension

PI: Michael E. Ullian

Total Award: \$40,000

Agency: American Heart Association, South Carolina Affiliate

Duration: 1997-1998

Type: Grant-in-Aid

Title: Mineralocorticoid resistance in the Wistar-Furth rat

PI: Michael E. Ullian

Total Award: \$25,000

Agency: Dialysis Clinic, Inc.

Duration: 1998-2000

Type: Paul Teschan Research Fund

Title: Wistar-Furth rats are resistant to remnant nephropathy  
PI: Michael E. Ullian  
Total Award: \$100,000

Agency: Veterans Administration  
Duration: 2000-2003  
Type: merit award  
Title: Role of receptor trafficking in the regulation of angiotensin II action  
PI: Richard V. Paul  
Total Award: \$450,000

Agency: Dialysis Clinic, Inc.  
Duration: 2002-2003  
Type: Dialysis Director's Research Fund  
Title: Aldosterone and citrate synthase in progressive renal injury  
PI: Michael E. Ullian  
Total Award: \$140,000

Agency: Dialysis Clinic, Inc.  
Duration: 2004-2009  
Type: Dialysis Director's Research Fund  
Title: Regulation of angiotensin AT1 receptors by anti-oxidants  
PI: Michael E. Ullian  
Award: \$75,000/yr

Agency: Dialysis Clinic, Inc.  
Duration: 2009-present  
Type: Dialysis Director's Research Fund  
Title: Role of angiotensin II in peritoneal sclerosis  
PI: Michael E. Ullian  
Award: \$75,000/yr

#### MEMBERSHIPS

American Society of Nephrology  
Southern Society for Clinical Investigation

#### BOARD CERTIFICATION

Diplomate, National Board of Medical Examiners, 1982  
American Board of Internal Medicine, 1984  
American Board of Internal Medicine, Nephrology, 1989

Medical Licensure, South Carolina (#14380)

### MUSC COMMITTEES

Director, DCI/MUSC home dialysis program, 1999-present  
Director, DCI/MUSC satellite hemodialysis unit (Magnolia Court), 1996-present  
Director, MUSC Nephrology Division Conferences, 1989-present  
Director, MUSC Nephrology Continuing Medical Education, 1989-present  
Director, MUSC Nephrology lecture series for Physicians' Assistant students, 1995-present  
Director, Charleston VA Hospital Renal Clinic, 2000-present  
Member, MUSC Nephrology Division training program executive committee, 1996-present  
Member, MUSC Department of Medicine Internship Selection Committee, 1990-present  
Consultant, MUSC MDII renal block committee, 2009-present  
Member, MUSC Distinguished Faculty Service Award Committee, 2009  
Member, MUSC Department of Medicine Promotions and Tenure Committee, 2004-2006  
Member, MUSC Department of Medicine Strategic Planning Committee, 2004-2007  
Member, MUSC Department of Medicine Education Committee, 2006-present  
Member, MUSC URC Resident Research Committee, 1994-present  
Member, MUSC Institutional Animal Care and Utilization Committee, 1992-1996  
Member, MUSC Ambulatory Care Medical Record Review Committee, 1997-1998  
Member, Charleston VA Hospital Medical Record Committee, 1995-1997  
Member, MUSC Department of Medicine Faculty Incentive Committee, 1993-1994  
Member, MUSC Department of Medicine Quality Assurance Committee, 1992-1997  
Member, MUSC Department of Medicine Ambulatory Clinic Committee, 1993-1995  
Director, Charleston VA Hospital Home Dialysis Program, 1995-1997  
Director, MUSC satellite hemodialysis unit (Hampton Hospital), 1998  
Director, MUSC home dialysis Program, 1990-1999  
Judge, MUSC Student Research Day, 1989-2002

### HOSPITAL PRIVILEGES

Medical University of South Carolina Hospital, Charleston, SC  
Ralph H. Johnson Veterans Administration Hospital, Charleston, SC  
Kindred Hospital, Charleston, SC  
East Cooper Hospital, Mt. Pleasant, SC

### NON-MUSC ACTIVITIES

Grant reviewer, South Carolina-Georgia affiliates of American Heart Association, 1996-1997  
Grant reviewer, Mid-Atlantic Research Consortium of American Heart Association, 1997-2004  
Ad hoc grant reviewer, National Institutes of Health Cardiovascular B study section, 1997  
Member, Medical Advisory Board, South Carolina/National Kidney Foundation, 1992-1997  
Volunteer, National Kidney Foundation Kidney Early Evaluation Program (KEEP), 2008-present

## MANUSCRIPT REVIEW

*American Journal of the Medical Sciences* (Associate Editor)

*Advances in Chronic Kidney Disease* (Editorial Board)

*Cardiovascular Research*

*Hypertension*

*American Journal of Physiology*

*Life Sciences*

*American Journal of Kidney Diseases*

*Journal of the American Society of Nephrology*

*Kidney International*

*American Journal of Medicine*

*Endocrinology*

*American Journal of Hypertension*

## COMMUNITY ACTIVITIES

Alumnus interviewer for Harvard College, 1995-present

Captain/co-captain/member, local United States Tennis Association tennis team, 1993-2005

Recording secretary, City of Charleston Swim Team, 1997-1999

Chairman, City of Charleston Swim Team, 1999-2003

Stroke-and-turn official, United States Swimming of South Carolina, 1998-2003

Member, South Carolina chapter of the American Civil Liberties Union, 2003-present

## PUBLICATIONS:

### Original Research

1. **Ullian ME**, Molitoris BA. Bilateral congenital renal arteriovenous fistulas. *Clinical Nephrology* 27:293-297, 1987.
2. Linas SL, Marzec-Calvert R, **Ullian ME**, O'Brien RF. Mechanisms of the anti-hypertensive effect of K depletion in the spontaneously hypertensive rat. *Kidney International* 34:18-25, 1988.
3. **Ullian ME**, Linas SL. Milk-alkali syndrome in pregnancy. *Mineral and Electrolyte Metabolism* 14:208-210, 1988.
4. Dworkin LD, Grosser M, Feiner HD, **Ullian ME**, Parker M. Renal vascular effects of antihypertensive therapy in uninephrectomized SHR. *Kidney International* 35:790-798, 1989.
5. **Ullian ME**, Hammond WS, Alfrey AC, Schultz A, Molitoris BA. Beta-2-microglobulin-associated amyloidosis in chronic hemodialysis patients with carpal tunnel syndrome. *Medicine* 68:107-115, 1989.
6. **Ullian ME**, Linas SL. Role of receptor cycling in the regulation of angiotensin II surface receptor number and of angiotensin II uptake in vascular smooth muscle cells. *Journal of Clinical Investigation* 84:840-846, 1989.
7. **Ullian ME**, Linas SL. Angiotensin II surface receptor coupling to inositol trisphosphate formation in vascular smooth muscle cells. *Journal of Biological Chemistry* 269:195-200, 1990.

8. Linas SL, Marzec-Calvert RV, **Ullian ME**. K depletion alters angiotensin II receptor expression in vascular smooth muscle cells. *American Journal of Physiology* 258: C849-C854, 1990.
9. Dworkin LD, Levin RI, Benstein JA, Parker M, **Ullian ME**, Kim Y, Feiner HD. Effects of nifedipine and enalapril on glomerular injury in rats with deoxycorticosterone-salt hypertension. *American Journal of Physiology* 259: F598-F604, 1990.
10. Spiegel DS, **Ullian ME**, Zerbe G, Berl T. Determinants of survival and recovery in acute renal failure patients dialyzed in intensive care units. *American Journal of Nephrology* 11: 44-47, 1991.
11. **Ullian ME**, Schelling JR, Linas SL. Aldosterone enhances angiotensin II receptor binding and inositol phosphate responses. *Hypertension* 20: 67-73, 1992.
12. Okwu AK, **Ullian ME**, Halushka PV. Homologous desensitization of human platelet thromboxane A<sub>2</sub>/prostaglandin H<sub>2</sub> receptors. *Journal of Pharmacology and Experimental Therapeutics* 262: 238-245, 1992.
13. **Ullian ME**. Fatty acid inhibition of angiotensin II-stimulated inositol phosphates in smooth muscle cells. *American Journal of Physiology* 264: H595-H603, 1993.
14. **Ullian ME**, Hutchison FN, Hazen-Martin DJ, Morinelli TA. Angiotensin II-Aldosterone interactions on protein synthesis in vascular smooth muscle cells. *American Journal of Physiology*: 264: C1525-C1531, 1993.
15. **Ullian ME**, Fine JJ. Mechanisms of enhanced angiotensin II-stimulated signal transduction in vascular smooth muscle by aldosterone. *Journal of Cellular Physiology* 161: 201-208, 1994.
16. **Ullian ME**, Walsh LG, Wong KC. Potentiation of angiotensin II-stimulated vascular contraction by lithium. *American Journal of Physiology* 268: H2009-H2016, 1995.
17. Matsuda K, Mathur RS, **Ullian ME**, Halushka PV. Sex steroid regulation of thromboxane A<sub>2</sub> receptors in cultured rat aortic smooth muscle cells. *Prostaglandins* 49: 183-196, 1995.
18. **Ullian ME**, Walsh LG. Corticosterone metabolism and effects on angiotensin II receptors in vascular smooth muscle. *Circulation Research* 77: 702-709, 1995.
19. Davda RK, Stepniakowski KT, Lu G, **Ullian ME**, Goodfriend TL, Egan BM. Oleic acid inhibits endothelial nitric oxide synthase by a PKC-independent mechanism. *Hypertension* 26: 764-770, 1995.
20. Carter TB, Garris AG, **Ullian ME**. Rusty peritoneal dialysis fluid after intravenous administration of iron dextran. *American Journal of Kidney Disease* 27: 147-150, 1996.
21. **Ullian ME**, Hazen-Martin DJ, Walsh LG, Davda RK, Egan BM. Carbenoxolone damages endothelium and enhances vasoconstriction in aortic rings. *Hypertension* 27: 1346-1352, 1996.
22. **Ullian ME**, Walsh LG, Morinelli TA. Potentiation of angiotensin II action by corticosteroids in vascular tissue. *Cardiovascular Research* 32: 266-273, 1996.
23. **Ullian ME**, Islam MM, Robinson CJ, Fitzgibbon WR, Tobin ET, Paul RV. Resistance to mineralocorticoids in the Wistar-Furth rat. *American Journal of Physiology* 272: H1454-H1461, 1997.
24. Morinelli TA, Finley EL, Jaffa AA, Kurtz DT, **Ullian ME**. Tyrosine phosphorylation of phosphatidylinositol 3-kinase and of the TP receptor by the TX<sub>A2</sub> mimetic I-BOP in A7r5 cells. *Biochemical Pharmacology* 53: 1823-1832, 1997.
25. **Ullian ME**, Raymond JR, Willingham MC, Paul RV. Regulation of vascular angiotensin II receptors by EGF. *American Journal of Physiology* 273: C1241-C1249, 1997.

26. Becker KP, Ullian ME, Halushka PV. Cloning and characterization of an endogenous COS-7 cell thromboxane A<sub>2</sub> receptor. *Biochimica et Biophysica Acta* 1403: 109-114, 1998.
27. Pawate S, Schey KL, Meier GP, Ullian ME, Mais DE, Halushka PV. Expression, characterization, and purification of C-terminally hexahistidine-tagged thromboxane A<sub>2</sub> receptors. *Journal of Biological Chemistry* 273: 22753-22760, 1998.
28. Fitzgibbon WR, Greene EL, Grewal JS, Hutchison FN, Self SE, Latten SY, Ullian ME. Resistance to remnant nephropathy in the Wistar-Furth rat. *Journal of the American Society of Nephrology* 10: 814-821, 1999.
29. Emili S, Black NA, Paul RV, Rexing CJ, Ullian ME. A systematic approach to intradialytic hypotension in hospital-based hemodialysis patients. *American Journal of Kidney Diseases* 33: 1107-1114, 1999.
30. Velarde V, Ullian ME, Morinelli TA, Mayfield RK, Jaffa AA. Mechanisms of MAPK activation by bradykinin in vascular smooth muscle cells. *American Journal of Physiology* 277: C253-C261, 1999.
31. Ullian ME, Robinson CJ, Evans CTB, Melnick JZ, Fitzgibbon WR. The role of citrate synthase in aldosterone-mediate sodium reabsorption. *Hypertension* 35: 875-879, 2000.
32. Chen R, Mukhin YV, Garnovskaya MN, Thielen TE, Iijima Y, Huang C, Raymond JR, Ullian ME, Paul RV. A functional angiotensin II type 1a receptor-GFP fusion protein: evidence for agonist-dependent nuclear translocation. *American Journal of Physiology* 279: F440-F448, 2000.
33. Ullian ME, Parker H, Sibbald LD, Peabody A, Jensen JF. Effect of increasing dialysate flow rates on adequacy of peritoneal dialysis. *Peritoneal Dialysis International* 20: 571-574, 2000.
34. DaVanzo WJ, Ullian ME. L-carnitine administration reverses acute mental status changes in a chronic hemodialysis patient with hepatitis C infection. *Clinical Nephrology* 57: 402-405, 2002.
35. Ullian ME, Gantt BJ, Ford AK, Tholanikunnel BG, Spicer EK, Fitzgibbon. Potential importance of glomerular citrate synthase activity in remnant nephropathy. *Kidney International* 63: 156-164, 2003.
36. Mukhin YV, Garnovsky EA, Ullian ME, Garnovskaya MN. Bradykinin B<sub>2</sub> receptor activates extracellular signal regulated protein kinase in mIMCD-3 cells via epidermal growth factor receptor transactivation. *J Pharmacology and Experimental Therapeutics* 304: 968-977, 2003.
37. Gadegbeku CA, Shrayyef MZ, Ullian ME. Hemodynamic effects of chronic hemodialysis therapy assessed by pulse waveform analysis. *American Journal of Hypertension* 16: 67-71, 2003.
38. Garnovskaya MN, Mukhin YV, Turner JH, Vlasova TM, Ullian ME, Raymond JR. Mitogen-induced activation of Na<sup>+</sup>/H<sup>+</sup> exchange in vascular smooth muscle cells involves janus kinase 2 and Ca<sup>2+</sup>/calmodulin. *Biochemistry* 42: 7178-7187, 2003.
39. Mukhin YV, Garnovskaya MN, Ullian ME, Raymond JR. ERK is regulated by sodium-proton exchanger in rat aortic vascular smooth muscle cells. *Journal of Biological Chemistry* 279: 1845-1852, 2004.
40. Garnovskaya MN, Mukhin YV, Vlasova TM, Grewal JS, Ullian ME, Tholanikunnel BG, Raymond JR. Mitogen-induced rapid phosphorylation of serine 795 of the retinoblastoma gene product in vascular smooth muscle cells involves ERK activation. *Journal of Biological Chemistry* 279: 24899-24905, 2004.

41. **Ullian ME**, Webb JG, Chen R, Paul RV, Morinelli TA. Mechanisms of vascular angiotensin II surface receptor regulation by epidermal growth factor. *Journal of Cellular Physiology* 200: 451-457, 2004.
42. **Ullian ME**, Gadegbeku CA. Effects of intravenously administered iron on systemic blood pressure in hemodialysis patients. *Nephron Clinical Practice* 98: c83-c86, 2004.
43. **Ullian ME**, Gelasco AK, Fitzgibbon WR, Beck CN, Morinelli TA. N-acetylcysteine decreases angiotensin II receptor binding in vascular smooth muscle cells. *Journal of the American Society of Nephrology* 16, 2346-2353, 2005.
44. Chen JL, Batta A, Zheng SQ, Fitzgibbon WR, **Ullian ME**, Yu HW, Tso P, Salen G, Patel SB. The missense mutation in *Abcg5* gene in spontaneously hypertensive rats (SHR) segregates with phytosterolemia but not hypertension. *BMC Genetics* 6: 40, 2005.
45. Levitski-Heikkila TV, **Ullian ME**. Peritonitis with multiple rare environmental bacteria in a chronic peritoneal dialysis patient. *American Journal of Kidney Diseases* 46: E119-E124, 2005.
46. **Ullian ME**. Nephrology in medical education and other stories. *Medical Education* 41: 218-219, 2007.
47. Morinelli TA, Raymond JR, Baldys A, Yang Q, Lee MH, Luttrell L, **Ullian ME**. Identification of a putative nuclear localization sequence within the ANG II AT1a receptor associated with nuclear activation. *American Journal of Physiology* 292: C1398-C1408, 2007.
48. Morinelli TA, Walker LP, **Ullian ME**. Cox-2 expression stimulated by angiotensin II depends upon AT1 receptor internalization in vascular smooth muscle cells. *Biochimica et Biophysica Acta* 1783: 1048-1054, 2008
49. **Ullian ME**, Beck CN, Walker LP, Fitzgibbon WR, Morinelli TA. Thiol anti-oxidants regulate angiotensin II AT1 and arginine vasopressin V1 receptor functions differently in vascular smooth muscle cells. *American Journal of Hypertension* 22: 221-227, 2009.
50. Morinelli TA, Kendall RT, Luttrell LM, Walker LP, **Ullian ME**. Angiotensin II-induced cyclooxygenase 2 expression in rat aortic vascular smooth muscle cells does not require heterotrimeric G protein activation. *Journal of Pharmacology and Experimental Therapeutics* 330: 118-124, 2009.
51. Mugambi SM, **Ullian ME**. Bacteremia, sepsis, and peritonitis with *Pasteurella multocida* in a peritoneal dialysis patient. *Peritoneal Dialysis International* 2010 (in press).
52. Joseph AJ, Compton SP, Holmes LH, Annand A, Self SE, Fitzgibbon WR, **Ullian ME**. Utility of percutaneous renal biopsy in chronic kidney disease. *Nephrology* 15: 544-548, 2010.
53. Tomov SV, Flume PA, Stenbit AE, **Ullian ME**. Pre-renal azotemia from excessive sweating in an adult with a cystic fibrosis gene mutation. *Indian J Nephrology* (in press).
54. Dopson SJ, **Ullian ME**. Renal manifestations of thrombotic thrombocytopenic purpura (in review).

#### Invited Reviews/Book Chapters

55. **Ullian ME**, Berl T. The hepatorenal syndrome: recognition, management, and prevention. *Journal of Critical Illness* 1:67-74, 1986.
56. **Ullian ME**, Linas SL. Hemodynamic effects of potassium. *Seminars in Nephrology* 7:239-252, 1987.

57. **Ullian ME**, Linas SL. Hemodynamic effects of potassium on experimental hypertension. In: Laragh JH, Brenner BM, eds. Hypertension: pathophysiology, diagnosis, and management. New York: Raven Press, Ltd., 1990.
58. **Ullian ME**, Linas SL. Antihypertensive therapy. In: Schrier RW, ed. Drug therapy in liver and kidney disease. Boston: Little, Brown, and Co., 1991.
59. **Ullian ME**. The Wistar-Furth rat as a model of mineralocorticoid resistance. Kidney International 52: S-10-S-13, 1997.
60. **Ullian ME**. The role of corticosteroids in the regulation of vascular tone. Cardiovascular Research 41: 55-64, 1999.