BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME	POSITION TITLE
David M. Pollock	NRTC Endowed Professor
eRA COMMONS USER NAME dpollock	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Evansville, Evansville, IN	B.S.	1973-1978	Biology
University of Cincinnati, Cincinnati, OH	Ph.D.	1979-1983	Physiology
University of North Carolina at Chapel Hill, Chapel Hill, NC		1983-1987	Physiology

A. Personal Statement For over 30 years, I have been conducting research on the renal mechanisms contributing to blood pressure regulation and renal disease. My research has focused on animal models of renal disease and chronic studies that are clinically relevant. I am currently the P.I. on a Program Project Grant that focuses on endothelin control of renal function and I am also Co-director and Project Leader on another Program Project Grant dealing with environmental stress as a risk factor for hypertension development. I am also Co-PI on a U01 studying ETA blockade in sickle cell disease. For the past 10 years, I have been Director of the Georgia Regents University T32 Pre-Doctoral Training Program in Integrative Cardiovascular Biology. In my new position at UAB, I am Director of the Cardio-Renal Physiology and Medicine section whose charge it is to develop translational research and training programs. I have served on the National Institutes of Health panel that reviews pre- and post-doctoral fellowships related to organ system physiology and pathobiology. I have held a number of committee and leadership positions in professional societies including the American Physiological Society and the American Heart Association. In addition, I have served as a scientific advisor for several companies in the clinical development of endothelin antagonists including Speedel Pharmaceuticals, Abbott Laboratories, Pfizer Corporation, and Gilead Pharmaceuticals. I recently served as Associate Editor for the *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology* for 6 years and also serve on the editorial board of several journals including *Hypertension*. I currently serve as Editor-in-Chief of *Comparative Physiology*. I have mentored 12 PhD students,11 post-doctoral fellows, and 18 medical students in my laboratory as well as 16 additional PhD thesis committees.

B. Positions and Honors

Employment:

1988-89 Scientist, Institute for Circadian Physiology, Boston, MA
1989-92 Senior Scientist, Pharmaceutical Discovery, Abbott Laboratories, Abbott Park, IL
1992-95 Research Investigator, Pharmaceutical Discovery, Abbott Laboratories, Abbott Park, IL
1993-96 Visiting Assistant Professor, Dept. Biomed. Sciences, Univ. Illinois, Rockford, IL
1995-00 Assistant Professor, Vascular Biology Center, Depts. of Surgery, Physiology & Endocrinology, and Pharmacology & Toxicology, Medical College of Georgia, Augusta, GA.
2000-05 Associate Professor, Vascular Biology Center, Depts. of Surgery, Physiology & Endocrinology, and Pharmacology & Toxicology, Medical College of Georgia, Augusta, GA.
2005-08 Professor, Vascular Biology Center, Dept. of Surgery, Medical College of Georgia, Augusta, GA
2008-11 Regents' Professor, Vascular Biology Center, Dept. of Surgery, Medical College of Georgia (name changed to Georgia Health Sciences University), Augusta, GA
2010-11 Interim Program Director, Biomedical Sciences PhD Program, College of Graduate Studies
2011-13 Professor and Section Chief, Experimental Medicine, Department of Medicine, Georgia Health Sciences University, Augusta, GA
2014-present NRTC Endowed Professor and Director, Cardio-Renal Physiology and Medicine, University of Alabama at Birmingham, Birmingham, AL

National Study Sections:

1996,98 Ad hoc Reviewer, Veterans Administration Merit Review Board for Nephrology
1997 Ad hoc Reviewer, National Kidney Foundation of Michigan

1997	American Heart Association, Review Committee for Student Scholars
1999	External Reviewer, MRC of Canada, Diabetes Research Network
2000-03	Research Committee, National Kidney Foundation of Georgia (Chair 2001-2003)
2001-04	Molecular Signaling I Study Section, American Heart Association, National Center
2002	Ad hoc Reviewer, NIH Cardiorenal Study Section (CVB)
2003-05	Cardiorenal Study Section, American Heart Association, Southeast Affiliate
2004	Ad hoc Reviewer, National Heart Lung and Blood Institute T32 Study Section
2004	Ad hoc Reviewer, National Heart Lung and Blood Institute PPG Study Section
2005-present	NIH Physiology and Pathobiology of Organ Systems (ZRG1 F10) Study Section (F awards)
2006	Ad hoc Reviewer, NIH COBRE Special Emphasis Panel
2006-2011	Cardiorenal Review Panel, AHA National Center (Chair 2008, 2010-12)
2007	NIH Hypertension and Microcirculation Special Emphasis Panel (HM)
2008	NIH Circulation Regulation and Pathophysiology Special Emphasis Panel
2010	NIH Cell and Molecular Biology of the Kidney Special Emphasis Panel (CMBK)
2012	NIH Hypertension and Microcirculation (HM) Study Section

Honors and Awards:

1998-01	Scientist Development Award, American Heart Association
2000- present	Fellow, American Heart Association Council for High Blood Pressure Research
1998-01	Scientist Development Award, American Heart Association
2000-	Fellow, American Heart Association Council for High Blood Pressure Research
2000-02	American Heart Association, Kidney Council Executive Committee
2003- present	Fellow, American Heart Association Council on the Kidney in Cardiovascular Disease
2003	Outstanding Faculty Award, School of Graduate Studies, Medical College of Georgia
2003-07	Established Investigator Award, American Heart Association
2005- present	International Advisory Board on Endothelin
2006- present	Fellow, American Society of Nephrology
2007-10	Associate Editor, Vascular Pharmacology
2007-13	Associate Editor, Am. J. Physiol: Regulatory, Integrative & Comparative Physiol.
2007-10	Councilor, American Physiological Society
2009- present	Editor, Comprehensive Physiology
2011	Distinguished Research Award, College of Graduate Studies, Georgia Health Sciences Univ.
2013-2014	President-Elect, American Physiological Society
2013	Louis K Dahl Award Lecture, AHA Council for High Blood Pressure Research
2014-2015	President, American Physiological Society

C. Selected peer-reviewed publications (from >150, not including >40 reviews and book chapters).

1. Jin C, O'Boyle S, Kleven DT, Pollock JS, Pollock DM, and White JJ. Anti-hypertensive and anti-inflammatory actions of combined azilsartan and chlorthalidone in Dahl salt-sensitive rats on a high-fat, high-salt diet. Clin Expt Physiol Pharmacol 2014.
2. Jin C, Speed JS, Hyndman KA, O'Connor PM, and Pollock DM. Sex differences in ET-1 receptor expression and Ca2+ signaling in the IMCD. Am J Physiol Renal Physiol 305: F1099-1104, 2013.
3. Kittikulsuth W, Looney SW, and Pollock DM. Endothelin ET_B receptors contribute to sex differences in blood pressure elevation in angiotensin II hypertensive rats on a high-salt diet. Clin Expt Physiol Pharmacol 40: 362-370, 2013.
4. Saleh MA, Sandoval RM, Rhodes GJ, Campos-Bilderback SB, Molitoris BA, and Pollock DM. Chronic endothelin-1 infusion elevates glomerular sieving coefficient and proximal tubular albumin reuptake in the rat. Life Sci 91: 634-637, 2012.
5. Boesen EI, Krishnan KR, Pollock JS, and Pollock DM. ET_A activation mediates angiotensin II-induced infiltration of renal cortical T cells. J Am Soc Nephrol 22: 2187-2192, 2011.
6. Kittikulsuth W, Sullivan JC, and Pollock DM. ET-1 actions in the kidney: evidence for sex differences. Br J Pharmacol 168: 318-326, 2013.
7. Saleh MA, Pollock JS, and Pollock DM. Distinct actions of endothelin A-selective versus combined endothelin A/B receptor antagonists in early diabetic kidney disease. J Pharmacol Exptl Therap 338: 263-270, 2011.

8. Saleh MA, Boesen EI, Pollock JS, Savin VJ, and Pollock DM. Endothelin receptor A-specific stimulation of glomerular inflammation and injury in a streptozotocin-induced rat model of diabetes. Diabetologia 54: 979-988, 2011.
9. Schneider MP, Wach PF, Durley MK, Pollock JS, and Pollock DM. Sex differences in acute ANG II-mediated hemodynamic responses in mice. Am J Physiol Regu Integ Compar Physiol 299: R899-906, 2010.
10. Sullivan JC, Wang B, Boesen EI, D'Angelo G, Pollock JS, and Pollock DM. Novel use of ultrasound to examine regional blood flow in the mouse kidney. Am J Physiol Renal Physiol 297: F228-235, 2009.
11. Boesen EI, Sasser JM, Saleh MA, Potter WA, Woods M, Warner TD, Pollock JS, and Pollock DM. Interleukin-1beta, but not interleukin-6, enhances renal and systemic endothelin production in vivo. Am J Physiol Renal Physiol 295: F446-453, 2008.
12. Schneider MP, Ge Y, Pollock DM, Pollock JS, and Kohan DE. Collecting duct-derived endothelin regulates arterial pressure and Na excretion via nitric oxide. Hypertension 51: 1605-1610, 2008.
13. Nakano D, Pollock JS, and Pollock DM. Renal medullary ETB receptors produce diuresis and natriuresis via NOS1. Am J Physiol Renal Physiol 294: F1205-1211, 2008.
14. Sasser JM, Sullivan JC, Hobbs JL, Yamamoto T, Pollock DM, Carmines PK, and Pollock JS. Endothelin A receptor blockade reduces diabetic renal injury via an anti-inflammatory mechanism. J Am Soc Nephrol 18: 143-154, 2007.
15. Inscho EW, Imig JD, Cook AK, and Pollock DM. ETA and ETB receptors differentially modulate afferent and efferent arteriolar responses to endothelin. Br J Pharmacol 146: 1019-1026, 2005.

D. Ongoing Research Support

P01 HL95499 (DM Pollock) 08/06/10 – 04/30/15
NIH/NHLBI
Endothelin Control of Renal Hemodynamic and Excretory Function
The overall goal of this Program Project is to determine the physiological actions of ET-1. Project 1 will test the hypothesis that the ET_A receptor is an important pro-inflammatory mechanism in the kidney and that the ET_B receptor normally functions to protect against these changes.
Role: P.I., Project 1 Leader, Core A Leader

U01 HL117684-01 (Kutlar, Meiler, D.Pollock, co-P.I.) 08/01/13-07/31/18
NIH/NHLBI
The Role of Endothelin-1 in Sickle Cell Disease
The goal of this project is to test the hypothesis that endothelin-1 contributes to inflammation, vascular complications, and pain in sickle cell disease.
Role: co-P.I.

P01 HL69999 (Harshfield) 07/01/14 – 06/30/19
NIH/NHLBI
Stress Related Mechanisms of Hypertensive Risk. Project 3: Adiposity Induced Dysfunction of the Endothelin System
The overall hypothesis of this project is to determine the mechanisms by which adiposity leads to ET_B receptor dysfunction to produce alterations in sodium homeostasis.
Role: Project Leader

T32 HL076146 (DM Pollock) 04/01/09 – 03/31/14 – no cost extension
NIH/NHLBI
Multidisciplinary pre-doctoral training in integrative cardiovascular biology
The major goal is to train pre-doctoral Ph.D. and M.D./Ph.D. students for independent research careers in integrative cardiovascular biology utilizing molecular, genetic, cellular, tissue/organ, whole animal and human experimental approaches.
Role: P.I.

R01 DK44628 (EW Inscho) 03/1/08 - 02/28/13 – no cost extension
NIH/NHLBI
Purinergic regulation of the renal microvasculature
This project examines the role of P2 receptors in regulating renal microvascular function and autoregulatory behavior. Experiments focus on microvascular reactivity to P2 antagonists, alterations in microvascular

autoregulatory responses to changes in perfusion pressure and the calcium signaling pathways involved in those responses.
Role: co-investigator

R01 HL098135 (EW Inscho) 12/01/09 – 11/30/14
NIH/NHLBI
The Inflammatory Cytokines, MCP-1 and TGF-β, Mediate Renal Autoregulatory Impairment in Angiotensin II infused Hypertension
This project examines the role of inflammatory cytokines such as MCP-1 and TGF-beta in the deleterious effects of hypertension on renal microvascular function. Experiments focus on the impact of anti-inflammatory therapy on whole kidney and afferent arteriolar autoregulatory behavior, P2X1 receptor reactivity and calcium signaling events in preglomerular smooth muscle cells.
Role: co-investigator

Completed Research Support
Investigator Initiated Study (D. Pollock) 02/20/12 – 02/19/14
Abbott Laboratories
Endothelin Receptor Regulation
These studies will test the hypothesis that long-term treatment with ETA selective versus combined ETA/ETB receptor antagonists will differentially regulate endothelin receptor expression in renal and vascular tissue.

Investigator Initiated Study (D. Pollock) 07/19/12 – 06/28/14
Takeda Pharmaceuticals
Hypertension, Inflammation, Oxidative Stress, and Nitric Oxide in a Rodent Model of Metabolic Syndrome
These studies will test the hypothesis that azilsartan medoxomil reduces blood pressure in an experimental model of metabolic syndrome.

R01 HL60653 (JS Pollock) 07/01/09—06/30/11
NIH/NHLBI
Nitric Oxide and Endothelin Interactions in the Kidney.
To determine the interaction between NO and ET-1 in the collecting duct of the kidney. The central hypothesis is that ET-1 inhibits transport through stimulation of NO production in the collecting duct.
Role: co-P.I.

S10 RR024692 (D Pollock) 04/01/09 – 03/31/10
NIH/NCRR
Shared Instrumentation: Vevo 770 Ultrasound System
The purpose of this application is to provide funds for the purchase of ultrasound equipment specifically designed for use in rodents.

P01 HL74167 (RC Webb) 05/01/04 – 04/30/09
NIH/NHLBI
Cytokines and angiotensin II-induced hypertension: Project 4
The major goals are to determine the influence of TGFß and IL-1ß on renal endothelin action and distinguish ET_A and ET_B receptor function in the kidneys during angiotensin II-induced hypertension.
Role: Project Leader