

BIOGRAPHICAL SKETCH

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NAME Chris Baylis		POSITION TITLE Professor of Physiology and Medicine, Director, UF Hypertension Center		
eRA COMMONS USER NAME (credential, e.g., agency login) CBAYLIS				
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)				
INSTITUTION AND LOCATION		DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Leeds University, UK		B.S.	06/1971	Physiology
Leeds University, UK		Ph.D.	09/1974	Renal Physiology

A. Personal Statement

The goal of the proposed research is to investigate the importance of the vascular smooth muscle Jak2 signaling pathway in angiotensin II dependent hypertension and specifically to explore a novel therapeutic intervention that blocks Jak2. I have many years of experience leading a successful research group which has led to over 200 publications, thus I have the necessary ability and commitment to successfully carry out the proposed work. I am the Director of the University of Florida Hypertension Center and I have a long term research interest into the mechanisms and treatment of hypertension and renal disease. I am currently PI on an NIH-funded grant which investigates the role of nitric oxide deficiency and endothelial dysfunction in hypertension and chronic kidney disease. I also have a strong interest in the actions of the renin angiotensin system in the normal and diseased kidney and considerable expertise in generating angiotensin II dependent animal models of hypertension. I have an established collaboration with Peter Sayeski who has considerable expertise in development of transgenic mice and in depth understanding of the angiotensin II signaling pathway, Jak2.

B. Positions and Honors

1971-1974	Predocotrual student, Dept Physiology, Leeds Univ., U.K.
1974-1976	Postdoctoral fellow, Renal Division, UCSF, Science Research Council NATO fellowship.
1976-1977	Postdoctoral fellow, Renal Division, Brigham and Women's Hospital and Harvard Medical School, Boston, National Kidney Foundation fellow.
1977-1981	Assistant Professor, Department of Physiology, Manchester Univ, England, Wellcome Foundation Senior Biomedical Research fellowship.
1982-1983	Assistant Professor, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston
1983-1987	Assistant Professor, Dept Medicine, UCSD, San Diego, CA
1987-1990	Associate Professor, Dept Physiology, West Virginia University, Morgantown, WV
1990-2004	Professor, Dept Physiology, West Virginia University, Morgantown, WV
2004-Present	Professor of Physiology, Professor of Medicine, Director, Univ of Florida Hypertension Ctr

Other Experience and Professional Memberships

1990-1994	NIH Study Section Member; CVB.
2000-2003	VA Merit Review Board, Nephrology Section; Chair 2002-2003.
2003-2007	NIH Study Section Member, PBKD.
2010-	Member of the NIH College of CSR reviewers.
1996-1999	Section Editor, Current Opinion in Nephrology and Hypertension, Circulation and Hemodynamics Section.
1997-2001	Associate Editor, AJP Renal.

Current Editorial Board; Am J Physiol, Regulatory and Renal, Hypertension

Honors and Awards

1996 Hungarian Society of Nephrology, Koranyi Sandor award.
1997 Benedum award for Biomedical Research at WVU
2004 J. Robert Cade, Professor of Physiology
2005 Barry M. Brenner Lecturer of the American Society of Nephrology
2006 Louis Dahl Award of the American Heart Association, Council for High Blood Pressure.
2007 Carl Gottschalk Award of the American Physiological Society, Renal Section.
2007, 2011, 2013 UF, COM Education Incentive Award
2008- 2011 Exemplary teacher award, UF.
2010, 2011 UF Research Foundation Professorship Award
2011 Harriet Dustan Award, Council for High Blood Pressure Research, AHA

C. Selected Peer-reviewed Publications (Selected from 190 peer-reviewed publications)

Most relevant to the current application

1. Qiu C, Muchant D, Beiewaltes W, Racusen L, Baylis C. Evolution of chronic NO inhibition hypertension. Relationship to renal function. *Hypertension* 31:21-26, 1998. PMID:9449385
2. Chen G-F, Wagner L, Sasser JM, Zharikov S, Moningka NC, Baylis C. Effects of AT1 receptor blockade on Arginine/ADMA Synthesis and Metabolic Pathways in Fawn-Hooded Hypertensive Rats. *Nephrol Dial Transplant.* 25:3518-25. 2010. PMID:20484304.
3. Sasser JM, Moningka NC, Cunningham MW Jr, Croker BP, Baylis C. Asymmetric Dimethylarginine in Angiotensin II Induced Hypertension. *Am J Physiol Regul Integr Comp Physiol.* 298:R740-6, 2010. PMID:20018820
4. Sasser JM, Molnar M, Baylis C. Relaxin ameliorates hypertension and increases nitric oxide metabolite excretion in Angiotensin II but not L-NAME induced hypertensive rats. *Hypertension* 58:197-204 2011. PMID:21670419
5. Kirabo A, Kearns PN, Jarajapu YP, Sasser JM, Oh SP, Grant MB, Kasahara H, Cardounel AJ, Baylis C, Wagner KU, Sayeski PP. Deletion of Jak2 Tyrosine Kinase within Vascular Smooth Muscle Cells Attenuates Angiotensin II induced Hypertension in Mice due to Reduced Levels of Reactive Oxygen Species. *Cardiovasc Res*, Jul 91:171-9, 2011. PMID:21670419

Additional recent publications of importance to the field (in chronological order)

6. Qiu C, Engels K, Baylis C. Importance of angiotensin II and α_1 -adrenergic tone in chronic nitric oxide blockade-induced hypertension in conscious rats. *Am. J. Physiol.* 266:R1470-R1476, 1994. PMID:8203622
7. Baylis C, Engels K, Hymel A, Navar LG. Plasma renin activity and metabolic clearance rate of angiotensin II in the unstressed aging rat. *Mech Aging Dev.*97:163-171, 1997. PMID:9226634
8. Qiu C and Baylis C. Endothelin and angiotensin mediate glomerular responses to nitric oxide inhibition. *Kidney Int.* 55:2390-2396, 1999. PMID:10354287
9. Baylis C. Arginine, arginine analogs and nitric oxide production in chronic kidney disease (CKD). *Nature Clinical Practice Nephrology.* 2: 209-220, 2006 PMID:16932427
10. Tain Y-L, Muller V, Szabo A, Dikalova A, Griendling K, Baylis C. Lack of long-term protective effect of antioxidant /anti-inflammatory therapy in a rat kidney isograft model. *Am J Nephrol* 26:213-217 2006 PMID:16720982
11. Szabo A, Muller V, Samsell LJ, Erdely A, Baylis C. Nephron number determines susceptibility to renal mass reduction-induced CKD in Lewis and Fisher 344 rats: Implications for development of experimentally induced chronic allograft nephropathy. *Nephrol Dial Transplant.* 23:2492-5, 2008. PMID:18332065
12. Chen G-F, Baylis C. In Vivo Renal Arginine Release is Impaired throughout development of Chronic Kidney Disease. *Am J Physiol Renal.* 298:F95-102, 2010 PMID:19906948

"Glomerular Function in Pregnancy in Health and Disease"

Major goals: Investigate the role of increased NO production in the circulatory and renal hemodynamic changes in normal pregnancy and NO deficiency as cause of preeclampsia.

Role: PI