

**BIOGRAPHICAL SKETCH**

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NAME <b>Julie A. Johnson</b>		POSITION TITLE <b>Professor and Chair</b>	
eRA COMMONS USER NAME <b>jajohnson</b>			
EDUCATION/TRAINING ( <i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i> )			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Ohio State University	B.S.	1980-1985	Pharmacy
University of Texas	Pharm.D.	1985-1987	Clinical Pharmacy
Ohio State University	Fellowship	1987-1989	Pharmacokinetics/ clinical pharmacology

**Professional Experience**

1989-93 Assistant Professor of Clinical Pharmacy, University of Tennessee College of Pharmacy  
 1993-98 Associate Professor of Clinical Pharmacy, University of Tennessee College of Pharmacy  
 1998-2001 Associate Professor of Pharmacy Practice, University of Florida College of Pharmacy  
 1999-2001 Associate Professor of Medicine (Cardiology), University of Florida College of Medicine  
 2001-present Professor of Pharmacy Practice (tenured), University of Florida College of Pharmacy  
 2001-present Professor of Medicine (Cardiology), University of Florida College of Medicine  
 2001-present Director, University of Florida Center for Pharmacogenomics  
 2002-present Professor of Pharmaceutical Sciences, University of Florida College of Pharmacy  
 2002-present Chair, Department of Pharmacy Practice, University of Florida  
 2004-present V. Ravi Chandran Professor of Pharmaceutical Sciences – endowed professorship

**Professional Awards and Honors**

Inducted Fellow, American College of Clinical Pharmacy (1996); University of Tennessee Student Government Association Excellence in Teaching Award (1996) Ohio State University William Oxley Thompson Alumni Award, for early career achievement (1997); Outstanding Faculty Award, University of Florida Working Professional Pharm.D. Program (2001); Leon I. Goldberg Young Investigator Award, American Society for Clinical Pharmacology and Therapeutics (2004); University of Florida Research Foundation Professorship Award (2004-2006); V. Ravi Chandran Professor of Pharmaceutical Sciences – endowed professorship (2004-present); Ohio State University College of Pharmacy Distinguished Alumni Award (2005)

**Professional Appointments and Activities (selected)**

FDA Nonprescription Drugs Advisory Committee Member, 2000-2004  
 NIH/NHLBI - Pediatric Heart Disease Clinical Research Network, Protocol Review Committee member, 2002 to 2007  
 NIH/NHLBI – Special Emphasis Panel member, February 2002, May 2002, April 2004  
 NIH/NIGMS – National Advisory Council, ad hoc member, January 2006  
 NIH – XNDA Study Section, ad hoc member, February 2006  
 NIH/NHLBI – Workshop on Genetic Determinants of Response to Drug Therapies in Heart Failure, speaker, Sept 2002  
 NIH/NHLBI - Working Group on Polymorphisms of the  $\beta$ -adrenergic Receptor Gene: Implications for the Pharmacotherapy of Asthma, participant/speaker, June 2003.  
 NIH/NHLBI – Behavioral Genetics and Cardiovascular Disease Working Group; participant/speaker. August 2005.  
 American Heart Association: Southern and Ohio Valley Consortium Grant Review Committee 3A. Member - 2004; Co-chair - 2005; Committee 3B: Chair – 2006-2007  
 American Heart Association Florida/Puerto Rico Affiliate Research Committee, 2004-06.  
 Editorial Boards: Scientific Editor – *Pharmacotherapy*; Editorial Boards – *Pharmacogenetics and Genomics*, *Clinical Pharmacology and Therapeutics*, *Personalized Medicine*.

**Selected Publications**

Evans WE, **Johnson JA**. Pharmacogenomics: The inherited basis for inter-individual differences in drug response. (Invited review) *Ann Rev Genomics Hum Genet*, 2001;2:9-39.

- Johnson JA**, Evans WE. Molecular diagnostics as a predictive tool: Genetics of drug efficacy and toxicity. (Invited review) Trends Mol Med 2002;8:300-305.
- Lou X-Y, Casella G, Littell RC, Yang MCK, **Johnson JA**, Wu R. A haplotype-based algorithm for multilocus linkage disequilibrium mapping of quantitative trait loci with epistasis. Genetics 2003;163:1533-48.
- Johnson JA**, Zineh I, Puckett BJ, McGorray SP, Pauly DF.  $\beta_1$ -adrenergic receptor genetic polymorphisms and antihypertensive response to metoprolol. Clin Pharmacol Ther 2003;74:44-52.
- Johnson JA**, Lima JJ. Drug receptor/effector polymorphisms and pharmacogenetics: Current status and challenges. (Invited review) Pharmacogenetics 2003;13:525-534.
- Johnson JA**. Pharmacogenetics: Potential for individualized drug therapy through genetics. (Invited review) Trends Genet 2003;19:660-666.
- Aquilante CL, Lobbmeyer MT, Langae TY, **Johnson JA**. Comparison of CYP2C9 genotyping methods and implications for the clinical laboratory. Pharmacotherapy 2004;24:720-726.
- Johnson JA**, Langae TY, Zineh I, Beitelshes AL. Caution with  $\beta_1$ -adrenergic receptor genotyping (Letter). Clin Pharmacol Ther 2004;76:186.
- Gong Y, Zhu Y, Wang Z, Zhao W, **Johnson JA**, Wu R. A statistical model for functional mapping of quantitative trait loci regulating drug response. Pharmacogenomics J 2004;4:315-321.
- Kim K, **Johnson JA**, Derendorf H. Differences in drug pharmacokinetics between Asians and Caucasians and the role of genetic polymorphisms. J Clin Pharmacol 2004;44:1083-1105
- Aquilante CL, Humma LM, Yarandi HN, Andrisin TE, Lewis JF, Hamilton KK, **Johnson JA**. The influence of sex and race on pharmacodynamics response to dobutamine during dobutamine stress echocardiography. Am J Cardiol 2004;94:535-538.
- Zineh I, Beitelshes AL, Gaedigk A, Walker JR, Pauly DF, Leeder JS, Phillips MS, Gelfand CA, **Johnson JA**. Pharmacokinetics and CYP2D6 Genotypes Do Not Predict Metoprolol Adverse Events or Efficacy in Hypertension Clin Pharmacol Ther 2004;76:536-44.
- Liu T, **Johnson JA**, Casella G, Wu R. Sequencing complex diseases with HapMap. Genetics 2004;168:503-511.
- Johnson JA**. Drug target pharmacogenetics. In: Pharmacogenomics – Applications to Patient Care. ACCP: Kansas City, Missouri, 2004, pp. 337-376.
- Johnson JA**, Cavallari LH. Cardiovascular pharmacogenomics. In: Raizada MK, Paton JFR, Kasparov S, Katovich MJ (eds). Cardiovascular Genomics. Humana Press, Inc: Totowa, NJ, 2005, pp.71-93.
- Terra SG, Pauly DF, Lee CR, Patterson JH, Adams KF, Schofield RS, Hamilton KK, Aranda JM, Hill JA, Yarandi HN, **Johnson JA**. Effect of  $\beta$ -adrenergic receptor polymorphisms on the tolerability of metoprolol CR/XL in patients with heart failure. Clin Pharmacol Ther 2005;77:127-37.
- Parker RB, Patterson JH, **Johnson JA**,. Heart Failure. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM (eds). Pharmacotherapy A Pathophysiologic Approach, 6th Edition. McGraw Hill: New York, New York, 2005, pp. 219-260.
- Lima JJ, Beasley BNT, Parker RB, **Johnson JA**. A pharmacodynamic model of the effects of controlled-onset extended-release verapamil on 24 hour ambulatory blood pressure. Int J Clin Pharmacol Ther 2005;43:187-194.
- Lin M, Aquilante CL, **Johnson JA**, Wu R. Sequencing drug response with HapMap. Pharmacogenomics J 2005;5:149-56.
- Terra SG, Hamilton KK, Pauly DF, Lee CR, Patterson JH, Adams KF, Schofield RS, Belgado BS, Hill JA, Aranda JM, Yarandi HN, **Johnson JA**.  $\beta_1$ -adrenergic receptor polymorphisms and left ventricular remodeling changes in response to  $\beta$ -blocker therapy. Pharmacogenet Genomics 2005;15:227-234.
- Johnson JA**, Cavallari LH. Cardiovascular pharmacogenomics. (Invited review). Exp Physiol 2005;90:283-289.
- Terra SG, McGorray SP, McNamara DM, Cavallari LH, Wu R, Walker J, Wallace MR, Johnson BD, Bairey Merz CN, Sopko G, Pepine CJ, **Johnson JA**. Association between  $\beta$ -adrenergic receptor polymorphisms and their G-protein coupled receptors with body mass index and obesity in women: A report from the NHLBI-sponsored WISE study. Int J Obes 2005;29:746-54.
- Johnson JA**, Turner ST. Hypertension Pharmacogenomics: Current Status and Future Directions. (Invited review) Curr Opin Molec Ther 2005;7:218-225.
- Johnson JA**. Use of pharmacogenetics in clinical medicine: Hype or hope? (Editorial) Personalized Med 2005;2:279-282.
- Aquilante CL, Terra SG, Schofield RS, Pauly DF, Binkley PF, Hatton P, **Johnson JA**. The influence of metoprolol formulation on autonomic dysfunction in patients with heart failure. J Card Failure 2006, in press.
- Aquilante CL, Langae TY, Lopez LM, Yarandi HN, Tromberg JS, Mohuczy D, Gaston KL, Waddell CD, Chirico MJ, **Johnson JA**. Influence of coagulation factor, VKORC1 and CYP2C9 gene polymorphisms on warfarin dose requirements. Clin Pharmacol Ther 2006, in press.
- Beitelshes AL, Zineh I, Puckett BJ, Yarandi HN, Pauly DF, **Johnson JA**. Genetic determinants of  $\beta$ -blocker response: influence of phenotype and pharmacokinetics on drug target pharmacogenetics. Pharmacogenom J 2006; in press.

**Active research support**

U01 GM074492 (PI: J.A. Johnson)  
NIH/NIGMS

August 2005 – July 2010

“Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR)”

The aims of this study are to: identify genetic predictors of the antihypertensive and adverse metabolic responses to a  $\beta$ -blocker (atenolol) and a thiazide diuretic (HCTZ), first by testing 7 SNPs in each of 70 candidate genes for genetic associations with: antihypertensive responses to monotherapy (Aim 1a), addition of a second drug to monotherapy (Aim 1b), and combination therapy (Aim 1c); and adverse metabolic responses to mono and combination therapy (Aim 1d). Aim 2 will seek to identify genetic associations with these same responses through testing of 20,000 putative functional SNPs that span the human genome.

R01 HL074730 (PI: J.A. Johnson)  
NIH/NHLBI

September 2003- August 2007

“Hypertension pharmacogenetics”

The aims of this study are to: 1) Determine sequence in five genes relevant to calcium regulation and the calcium channel blocker response; 2) Determine *in vitro* functional consequences of discovered polymorphisms; 3) Determine association between sequence variability in relevant genes and antihypertensive response to verapamil; 4) Determine associations between genotype and outcomes (death, myocardial infarction, stroke) for patients taking atenolol, verapamil, trandolapril and hydrochlorothiazide; 5) Determine the role of assessing population stratification and ancestral proportions using genetic markers in pharmacogenetic studies.

1 K24 HL68834-01 (PI: J.A. Johnson)  
NIH/NHLBI

July 2002 to June 2007

“ $\beta$ -receptor polymorphisms and cardiovascular pharmacogenomics”

The aims of this Research Career Award are to provide additional protected research time to insure the continued success of the candidate in patient-oriented research and to aid in her training of future patient-oriented researchers. This award provides support to reduce teaching responsibilities of the PI to insure the ability to carry out patient oriented research.

Abbott Laboratories (PI: JA Johnson)

July 2002 to June 2006

“Heart Disease Outcomes: Impact of Genetics and Pharmacogenetics”

The aims of this project are to collect as many genetic samples as possible from participants of the INVEST international clinical trial. Genetic samples will then be used for testing of disease-gene hypotheses that might be useful in identifying new drug targets, along with limited testing of pharmacogenetic hypotheses. An explicit goal from the outset was to obtain sufficient numbers of genetic samples to facilitate development of a competitive application for federal funding to support larger pharmacogenetic efforts; such an application is contained herein.

American Heart Association, Florida/Puerto Rico Affiliate (PI/mentor: Johnson) July 2005-June 2007  
AHA Postdoctoral Fellowship; Fellow: Jaekyu Shin, Pharm.D.

This award provides support for a postdoctoral fellow

1 R01 HL64924 (PI: C.J. Pepine)  
NIH/NHLBI

April 2001 to March 2006

“Altered renin angiotensin system as a mechanism for coronary microvascular dysfunction”

The primary objective of this study is to further elucidate the mechanisms and consequences of coronary microvascular dysfunction in women without severe coronary stenoses. A parallel objective is to demonstrate that modulation of angiotensin II responses by ACE inhibition and/or AT-1 receptor blockade is clinically useful by decreasing morbidity due to vascular dysfunction. Finally, the study will investigate the genetic associations between variability in the renin angiotensin system and  $\beta$ -adrenergic receptor genes and coronary microvascular dysfunction.

**Completed research in previous 3 years**

1 R01 HL64691 (PI: J.A. Johnson)

May 2000 to April 2005

NIH/NHLBI

“ $\beta$ -adrenoceptor polymorphisms and hypertension”

The aims of this study are to determine if the  $\beta_1$ - and/or  $\beta_2$ AR receptor genes are: 1) hypertension genes and/or contribute to racial differences in hypertension, 2) disease modifying genes; specifically looking at the dipper phenotype in hypertension, or 3) drug response modifying genes by looking at antihypertensive response to  $\beta$ AR-blocker therapy.

Note: the PGRN proposal (U01 GM074492) was made instead of competitive renewal of this grant

U01 HL69758 supplement (PI of supplement: Johnson)

November 2001 to October 2003

NIH, National Heart Lung Blood Institute

“ $\beta$ -blocker pharmacogenetics in ethnic populations”

The purpose of this supplement was to support collection of genetic samples from the ethnically-diverse INVEST population, and then assess the influence of ethnicity on pharmacogenetic associations with  $\beta$ -blockers

R03 HL65729 (PI: Johnson)

April 1, 2001 to March 31, 2003

NIH, National Heart Lung Blood Institute

“ $\beta$ -adrenoceptor genetic polymorphisms and obesity”

The aim was to determine the genetic associations of adrenergic receptor polymorphisms with obesity phenotypes in women participants in the WISE study

American Foundation for Pharmaceutical Education (PI/mentor: Johnson) July 2002-December 2003

Post-Pharm.D. Fellowship in Biomedical Research Sciences; Fellow: Christina L. Aquilante, Pharm.D.

This provided stipend support for a post-doctoral fellow

American Heart Association, Florida/Puerto Rico Affiliate (PI/mentor: Johnson) July 2002-June 2004

AHA Postdoctoral Fellowship; Fellow: Issam Zineh, Pharm.D.

This award provided support for a postdoctoral fellow

Orchid Biosciences, Inc (PI: Johnson)

March 2001 to April 2004

“ $\beta$ -adrenergic receptor polymorphisms and response to  $\beta$ -blockers in heart failure”

The aim of this study was to test pharmacogenetic associations with the  $\beta$ -blocker response in heart failure, particularly the initial tolerability, and the changes in LV parameters.