

BIOGRAPHICAL SKETCH

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NAME Taimour Y. Langaee		POSITION TITLE Research Associate Professor	
eRA COMMONS USER NAME (credential, e.g., agency login)		Director, UF Center for Pharmacogenomics Genotyping Core Laboratory	
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 Texas At Arlington	B.Sc.	1976-1980	Microbiology
University of Tehran	M.Sc., M.S.P.H.	1985-1987	Microbiology-Public Health
University of Laval	Ph.D.	1994-1999	Microbiology and Immunology
University of Montreal	Postdoc Fellow	1999-2001	Immunology and Molecular Biology
University of Florida	Postdoc Fellow	2001-2002	Microbiology and Molecular Genetics

A. Positions and Honors

1981-1985 Research Assistant, College of Medicine, University of Tehran
 1985-1987 Research Assistant, College of Medicine, University of Tehran
 1987-1994 Director of Microbiology Laboratory, Bayer Pharmaceutical Co.
 1996 & 1997 Received Professional Student Awards from American Society for Microbiology
 1999-2001 Postdoctoral Fellow, College of Medicine, University of Montreal
 2001-2002 Postdoctoral Fellow, College of Medicine, University of Florida
 2002-Present Research Associate Professor and Director of UF Center for Pharmacogenomics
 Genotyping Core Laboratory, College of Pharmacy, University of Florida

B. Selected peer-reviewed publications (in chronological order)

- Langaee TY.**, Dargis M and Huletsky A An ampD gene in Pseudomonas aeruginosa encodes a negative regulator of AmpC beta-lactamase expression. Antimicrobial Agents and Chemotherapy Dec. 1998;3296-3300.
- Langaee TY.**, Gagnon, L and Huletsky, A. Inactivation of the ampD gene in Pseudomonas aeruginosa leads to moderate basal level and hyperinducible AmpC beta-lactamase expression. Antimicrobial Agents and Chemotherapy Mar. 2000;583-589.
- Langaee TY**, and Zineh I. (Book chapter) Applied Molecular and Cellular biology In: Pharmacogenomics: Applications to Patient Care. Published by American College of Clinical Pharmacy (ACCP), August 2004.
- .Aquilante CL, Lobmeyer MT, **Langaee TY**, Johnson JA. Comparison of cytochrome P450 2C9 genotyping methods and implications for the clinical laboratory. Pharmacotherapy 2004;24(6):720-6.
- Johnson JA, **Langaee TY**, Zineh I and Beitelshees AL. Caution with β_1 -adrenergic receptor genotyping. Clinical Pharmacology & Therapeutics 2004;76(2):185-86.
- Hruska MW, Frye RF, **Langaee TY**. Pyrosequencing Method for Genotyping Cytochrome P450 CYP2C8 and CYP2C9 Enzymes. Clin Chem. 2004 Dec;50(12):2392-5.
- Hruska MW, Amico JA, **Langaee TY**, Ferrell RE, Fitzgerald SM, Frye RF. The Effect of Trimethoprim on CYP2C8 Mediated Rosiglitazone Metabolism in Human Liver Microsomes and Healthy Subjects. Br J Clin Pharmacol (2005);59(1):70-79.
- Langaee TY** and Ronaghi M. Genetic Variation Analyses by Pyrosequencing. Mutation Research (2005);573(1-2):96-102.

9. Ronaghi M, **Langaee TY**. Single Nucleotide Polymorphism: Discovery, Detection and Analysis. *Personalized Medicine* (2005);2(2):111-125.
10. Aquilante CL, **Langaee TY**, Lopez LM, Yarandi HN, Tromberg JS, Mohuczy D, Gaston KL, Waddell CD, Chirico MJ, Johnson JA. Influence of coagulation factor, vitamin K epoxide reductase complex subunit 1, and cytochrome P450 2C9 gene polymorphisms on warfarin dose requirements. *Clin Pharmacol Ther*; 2006; 79:291-302.
11. Zineh I, Welder GJ, **Langaee TY**. Development and cross-validation of sequencing-based assays for genotyping common polymorphisms of the CXCL5 gene. *Clin Chim Acta*. 2006 Aug;370(1-2):72-5. Epub 2006 Mar 29.
12. Zineh I, Aquilante CL, **Langaee TY**, Beitelshes AL, Arant CB, Wessel TR, Schofield RS. CXCL5 gene polymorphisms are related to systemic concentrations and leukocyte production of epithelial neutrophil-activating peptide (ENA-78). *Cytokine* 2006 Mar 7;33(5):258-63. Epub 2006 Mar 29.
13. Aquilante CL, **Langaee TY**, Anderson PL, Zineh I, Fletcher CV. Multiplex PCR-pyrosequencing assay for genotyping CYP3A5 polymorphisms. *Clin Chim Acta*. 2006 Oct;372(1-2):195-8. Epub 2006 May 15.
14. Ortega M, **Langaee TY**, Gong Y, Feng H, Johnson JA. G protein $\beta 3$ subunit (GN $\beta 3$) Polymorphism and Hypertension. *UF Journal of Undergraduate Research, Volume 7, Issue 4 - March/April 2006*.
15. Aquilante CL, Zineh I, Beitelshes AL, **Langaee TY**. Common laboratory methods in pharmacogenomics studies. *Am J Health Syst Pharm*. 2006 Nov 1;63(21):2101-2110.
16. Shin J, Lobmeyer MT, Gong Y, Zineh I, **Langaee TY**, Yarandi H, Schofield RS, Aranda JM Jr, Hill JA, Pauly DF, Johnson JA. Relation of beta(2)-adrenoceptor haplotype to risk of death and heart transplantation in patients with heart failure. *Am J Cardiol* 2007 Jan 15;99(2):250-5.
17. **Langaee TY**, Gong Y, Yarandi HN, Katz DA, Cooper-DeHoff RM, Pepine CJ, Johnson JA. Association of CYP3A5 polymorphisms with hypertension and antihypertensive response to verapamil. *Clin Pharmacol Ther*. 2007 Mar;81(3):386-91.
18. Gong Y, Beitelshes AL, Wessel J, **Langaee TY**, Schork NJ, Johnson JA. Single nucleotide polymorphism discovery and haplotype analysis of Ca²⁺-dependent K⁺ channel beta-1 subunit. *Pharmacogenetics and Genomics* 2007;17:267-275.
19. Lobmeyer MT, Gong Y, Terra SG, Beitelshes AL, **Langaee TY**, Pauly DF, Schofield RS, Hamilton KK, Patterson HJ, Adams KF Jr, Hill JA, Aranda JM Jr, Johnson JA. Synergistic polymorphisms of beta1 and alpha2C-adrenergic receptors and the influence on left ventricular ejection fraction response to beta-blocker therapy in heart failure. *Pharmacogenetics and Genomics* 2007 17:277-282.
20. Brunner M, Cooper-Dehoff RM, Gong Y, Karnes JH, **Langaee TY**, Pepine CJ, Johnson JA; INVEST Investigators. Factors Influencing Blood Pressure Response to Trandolapril Add-on Therapy in Patients taking Verapamil SR (From the International Verapamil SR/Tandolapril [INVEST] Study). *Am J Cardiol* 2007 Jun 1;99(11):1549-1554.
21. Levin, GM, Bowles TM, Ehrel MJ, **Langaee TY**, Tan JY, Johnson JA, and Millard W. Assessment of Human Serotonin 1A Receptor Polymorphisms and SSRI Responsiveness. *Mol Diagn Ther* 2007;11(3):155-160.
22. Beitelshes AL, Gong Y, Wang D, Schork NJ, Cooper-Dehoff RM, **Langaee TY**, Shriver MD, Sadee W, Knot HJ, Pepine CJ, Johnson JA; for the INVEST Investigators. KCNMB1 genotype influences response to verapamil SR and adverse outcomes in the International Verapamil SR/Trandolapril Study (INVEST). *Pharmacogenet Genomics* 2007 Sep;17(9):719-729.
23. Michael D. Caldwell, Tarif Awad, Julie A. Johnson, Brian F. Gage, Mat Falkowski, Paul Gardina, Jason Hubbard, Yaron Turpaz, **Taimour Y. Langaee**, Charles Eby, Cristi King, Amy Brower, John R. Schmelzer, Ingrid Glurich, Humberto J. Vidaillet, Steven H Yale, Kai Qi Zhang, Richard L. Berg, and James K Burmester. CYP4F2 genetic variant alters required warfarin dose. *Blood*. 2008 Apr 15;111(8):4106-12. Epub 2008 Feb 4.

24. Gage BF, Eby C, Johnson JA, Deych E, Rieder MJ, Ridker PM, Milligan PE, Grice G, Lenzini P, Rettie AE, Aquilante CL, Grosso L, Marsh S, **Langaee T**, Farnett LE, Voora D1, Veenstra DL, Glynn R, Barrett A, and McLeod HL. Use of Pharmacogenetics and Clinical Factors to Predict the Therapeutic Dose of Warfarin. *Clin Pharmacol Ther.* 2008 Feb 27; [Epub ahead of print]
25. Hassan M, York KM, Li H, Li Q, Gong Y, **Langaee TY**, Fillingim RB, Johnson JA, Sheps DS. β -Adrenergic Receptor Polymorphisms Predict Hemodynamic and Myocardial Ischemic Responses to Mental Stress in Patients with Coronary Artery Disease. *Arch Intern Med.* 2008 Apr 14;168(7):763-70.
26. Zhu HJ, Patrick KS, Yuan HJ, Wang JS, Donovan JL, DeVane CL, Malcolm R, Johnson JA, Youngblood GL, Sweet DH, **Langaee TY**, Markowitz JS. Two CES1 gene mutations lead to dysfunctional carboxylesterase 1 activity in man: clinical significance and molecular basis. *Am J Hum Genet.* 2008 Jun;82(6):1241-8. PMID: 18485328
27. Salha MD, Cheyner R, Halwani R, McGrath H, **Langaee TY**, Yassine Diab B, Fournier J, Parenteau M, Edgar J, Ko D, Sherring A, Bogdanovic D, Sekaly RP, Rud EW. Persistence of restricted CD4 T cell expansions in SIV-infected macaques resistant to SHIV89.6P superinfection. *Virology.* 2008 Aug 1;377(2):239-47
28. Gregory M. Cooper, Julie A. Johnson, **Taimour Y. Langaee**, Hua Fang, Ian B. Stanaway, Marylyn D. Ritchie, Dan M. Roden, Joshua D. Smith, Dave L. Veenstra, Allan E. Rettie, Mark J. Rieder. A whole-genome scan for large effect genes influencing warfarin dosing. *Blood.* 2008 Jun 5. [Epub ahead of print]
29. G. Oner Ozgon , **T.Y. Langaee** , H. Feng , N. Buyru , T. Ulutin , A.C. Hatemi , A. Siva , S. Saip , J.A. Johnson. *VKORC1* and *CYP2C9* polymorphisms are associated with warfarin dose requirements in Turkish patients. *Eur J Clin Pharmacol.* 2008 Jun 10. [Epub ahead of print]
30. Stacpoole PW, Kurtz TL, Han Z, **Langaee T**. Role of Dichloroacetate in the Treatment of Genetic Mitochondrial Diseases. *Adv Drug Deliv Rev.* 2008 Jul 4. [Epub ahead of print]
31. Gerhard T, Gong Y, Beitelshees AL, Lobmeyer M, Copper-DeHoff RM, **Langaee TY**, Schork NJ, Pepine CJ, Johnson JA. Association between Cardiovascular Outcomes, Diuretics Therapy and the α -adducin Polymorphism: Results from the International Verapamil Study GENETic substudy (INVEST-GENES), *Am Heart J.* 2008 Aug;156(2):397-404. Epub 2008 Jun 20.
32. M.A. Pacanowski, Y. Gong, R.M. Cooper-DeHoff, N.J. Schork, M.D. Shriver, **T.Y. Langaee**, C.J. Pepine, J.A. Johnson, for the INVEST investigators. β -adrenergic receptor gene polymorphisms and β -blocker treatment outcomes in hypertension *Clin Pharmacol Ther.* 2008 Jul 9. [Epub ahead of print]
33. Pablo J. Pinedo, Claus D. Buergelt, G. Art Donovan, J. Elliot Williams, Pedro Melendez, Laurence Morel, Rongling Wu, **Taimour Y. Langaee** and D. Owen Rae. Association between *CARD15/NOD2* gene polymorphisms and paratuberculosis infection in Florida cattle. *Vet Microbiol.* 2008 Sep 19. [Epub ahead of print].
34. Johnson AD, Gong Y, Wang D, **Langaee TY**, Shin J, Cooper-DeHoff RM, Schork NJ, Binkley P, Pepine CJ, Johnson JA, Sadee W. Promoter polymorphisms in *ACE* (angiotensin-I converting enzyme) associated with clinical outcomes in hypertension. *Clin Pharmacol Ther.* 2008 Oct 22. [Epub ahead of print].
35. Mohamed-Eslam F. Mohamed, Reginald F. Frye, and **Taimour Y. Langaee**. Inter-population variation frequency of human inosine 5'-monophosphate dehydrogenase type II (*IMPDH2*) genetic polymorphisms. *Genet Test.* 2008 Nov 2. [Epub ahead of print]

36. Dungan JR, **Langaee TY**, Conley YP, Johnson JA, Kneipp SM, Hess PJ, Yucha CB. Differential Alpha1A and Beta2 Adrenergic Receptor Gene Expression in Clinical Hypertension (In press in the journal, Biological Research for Nursing 2008).
37. Shin Jaekyu, Steven Kayser, **Taimour Langaee**. Pharmacogenetics: From Discovery to Patient Care.(In press in, Am J Health Syst Pharm., 2008).
38. Mahsa Amoli, Parvin Amiri, Issam Zineh, **Taimour Y. Langaee**, Shirin Hasani Ranjbar *et al*. CXCL5 gene polymorphism association with diabetes. (In press in, Molecular Diagnosis & Therapy 2008).
39. Pablo J. Pinedo, Claus D. Buergelt, G. Art Donovan, Pedro Melendez, Laurence Morel, Rongling Wu, **Taimour Y. Langaee** and D. Owen Rae. Analysis of the Association between Three Candidate Genes and paratuberculosis infection in cattle. (Submitted, 2008).
40. Anzeela M. Schentrup, John J. Lima, Hooman Allayee, Julie A. Johnson, and **Taimour Y. Langaee**. Genotyping the GGGCGG tandem repeat promoter polymorphism in the 5-lipoxygenase enzyme gene (*ALOX5*) by pyrosequencing assay. (Submitted, 2008).
41. Yuxin N. **Langaee TY**, Gong Y, Moss JI, Cooper-Dehoff RM, Pepine CJ, Johnson JA. DNA variations in Voltage-gated Calcium Channel Beta 2 Subunit (CACNB2) Gene and their association with adverse cardiovascular outcomes in the INternational VERapamil SR-trandolapril STudy-GENetic Substudy (INVEST-GENES). (Submitted 2008).

C. Research Support

Ongoing Research

U01 HL083459 (PI: Dr. Julie Johnson) (Co-investigator; 40%)
Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR)
10/01/2005-09/30/2010.

The aims of this study are to: identify genetic predictors of the antihypertensive and adverse metabolic responses to a β -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 seeks to identify genetic associations with these same responses through testing of 20,000 putative functional SNPs that span the human genome.

RO1-HL0747000; NIH/HLBI; (PI: Dr. Julie Johnson) (Co-investigator; 40%)
10/01/2003-09/30/2007
Hypertension Pharmacogenomics

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.

NIH, National Institute for Environmental Health Science (PI: Dr. Peter Stacpoole)
04/01/2005-03/30/2010 (Co-investigator; 5%)
Health Effects of Chlorinated Compounds: Pharmacotoxicology of Trichloroethylene Metabolites

R24 NIH Planning Grant (PI; Dr. Frank Catalanotto) (Co-investigator; 5%)

Program Director/Principal Investigator (Last, First, Middle): Johnson, Julie A.

10/01/2007 to 09/31/2008

To plan and establish the feasibility of the key technology underlying a planned P50 proposal to support the expanding chemosensory clinical research program of the University of Florida's Center for Smell and Taste.

Completed Research Support

Co-Principal Investigator

UF Research and Graduate Opportunity Fund Grant (2003)

Co-Principal Investigator

UF Research and Graduate Opportunity Fund Grant (2005)

Co-Investigator

R01-MH63458-04 NIH/NIMH (PI: Dr. Reggie Frye) 5%

10/01/2003 – 04/30/2005

St. John's Wort and CYP3A metabolism in Men & Women

Co-Investigator

National Center Research Program (PI: Dr. Issam Zineh) 5%

American Heart Association National Research Program

Immunomodulatory Effects and Pharmacogenetics of Atorvastatin in Early Atherosclerosis

Consultant

Pre-doctoral Fellowship-#0415124B; (PI: Jennifer R. Dungan) 2%

American Heart Association 07/01/2004-06/30/2005

Alpha 1A- and Beta2-Adrenoceptor Gene Expression Differences in Hypertensive and Normotensive Persons by Race