

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Stephen D. Simon		POSITION TITLE Professor / Independent Statistical Consultant	
eRA COMMONS USER NAME (credential, e.g., agency login) simons			
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
University of Iowa	B.A.	06/77	Mathematics
University of Iowa	M.S.	12/78	Statistics
University of Iowa	Ph.D.	12/82	Statistics

A. Personal Statement

I will be providing statistical oversight for this grant. I have been actively consulting in Statistics for over three decades starting as the student leader of the Statistics Consulting Center at the University of Iowa in the 1970s. I have also worked at the Statistical Consulting Center at Bowling Green State University and am currently setting up a similar center at the University of Missouri-Kansas City.

I have an outstanding track record in dissemination of research results. I have over 80 peer reviewed publications, four of which have won major awards. I have published a book about the statistical aspects of Evidence-Based Medicine and have a contract to produce a second book. I am the author of two major websites about statistical methodology (www.childrensmc.org/stats and www.pmean.com) and have an email newsletter about Statistics (The Monthly Mean) with over 400 subscribers.

While my Statistics background is very broad, I have extensive experience in applications to medicine. I spent nine years working with a wide range of projects in occupational safety and health at a federal agency, twelve years working on pediatric research applications at a children’s hospital, and three years working on biomedical and health informatics at a research university. Many of my clients for my independent consulting company come from health care settings and pharmaceutical firms.

I have working knowledge of almost every major Statistical package, and have published several articles back in the 1980s evaluating the numerical accuracy of regression and ANOVA procedures in these packages. I have presented seminars and taught short courses on programming in SAS, SPSS, and R. I submitted code in R to a programming contest sponsored by Revolution Analytics and won an honorable mention in that completion.

B. Positions and Honors

Positions and Employment

- 1979 – 1981 Research Assistant, Statistical Consulting Center, University of Iowa
- 1981 – 1987 Assistant Professor, Department of Applied Statistics and Operations Research, Bowling Green State University, Bowling Green, Ohio
- 1987 – 1987 Research Statistician, Division of Biomedical and Behavioral Science, National Institute for Occupational Safety and Health, Cincinnati, Ohio
- 1987 – 1996 Chief, Statistics Activity, Division of Biomedical and Behavioral Science, National Institute for Occupational Safety and Health, Cincinnati, Ohio
- 1996 – 2008 Research Biostatistician, Office of Medical Research, Children’s Mercy Hospital, Kansas City, Missouri, with an adjunct faculty appointment at the University of Missouri-Kansas City

- 2008 – present Part-time Independent Statistical Consultant, P.Mean Consulting, Leawood, Kansas
2008 – present Part-time Professor, Department of Biomedical and Health Informatics, University of Missouri-Kansas City, Kansas City, Missouri

Other Experience and Professional Memberships

1984 Member, American Statistical Association

Honors

- 1990 Public Health Service Achievement Medal given for producing cost savings and greater operational efficiency through the use of micro-computer analysis of statistical data.
1990 Alice Hamilton Award given to a paper I co-authored (Schrader et al Reproductive Toxicology 1988; 2: 183-190).
1991 Alice Hamilton Award given to a paper I co-authored (Schrader et al Reproductive Toxicology 1988; 2: 183-190).
1994 Public Health Service Commendation Medal given in July 1994 for my oversight of a laboratory modernization effort.
1997 Best presentation in the area of Teaching Statistics in the Health Sciences given for a talk at the Joint Statistical Meetings in Anaheim CA (Simon "Medical Statistics Case Studies on the Web").
1999 Alice Hamilton Award (Biological Sciences Category) given to a paper I co-authored (Moorman et al Reproductive Toxicology 1998;12(3):333-46).
2003 Editor's Award given to a paper I coauthored (Miller et al Am J Audiology 2003;24(1);16-18).
2012 Honorable mention and \$1,000 cash award given for R code that I submitted to the Applications of R in Business competition sponsored by Revolution Analytics.

C. Selected Peer-reviewed Publications (selected from 80 peer-reviewed publications)

Most recent publications

1. Auron A, Warady BA, Simon S, Blowey DL, Srivastava T, Musharaf G, Alon US. Use of the multipurpose drainage catheter for the provision of acute peritoneal dialysis in infants and children. *Am J Kidney Dis.* 2007 May;49(5):650-5.
2. Auron A, Simon S, Andrews W, Jones L, Johnson S, Musharaf G, Warady BA. Prevention of peritonitis in children receiving peritoneal dialysis. *Pediatr Nephrol.* 2007 Apr;22(4):578-85. Epub 2007 Jan 10.
3. Hampl SE, Carroll CA, Simon SD, Sharma V. Resource utilization and expenditures for overweight and obese children. *Arch Pediatr Adolesc Med.* 2007 Jan;161(1):11-4.
4. Horii, K. A., Simon, S.D., Liu, D. Y., Sharma, V. Atopic dermatitis in children in the United States, 1997-2004: visit trends, patient and provider characteristics, and prescribing patterns. *Pediatrics* 2007: 120(3): e527-34.
5. Adjei, A. A., Gaedigk, A., Simon, S. D., Weinshilboum, R. M., Leeder, J. S. Interindividual variability in acetaminophen sulfation by human fetal liver: implications for pharmacogenetic investigations of drug-induced birth defects. *Birth Defects Res A Clin Mol Teratol* 2008: 82(3): 155-65.
6. Gaedigk, A., Simon, S.D., Pearce, R. E., Bradford, L. D., Kennedy, M. J., Leeder, J. S. The CYP2D6 activity score: translating genotype information into a qualitative measure of phenotype. *Clin Pharmacol Ther* 2008: 83(2): 234-42.
7. Gajewski, B. J., Simon, S.D., Carlson, S.E. Predicting accrual in clinical trials with Bayesian posterior predictive distributions. *Stat Med* 2008: 27(13): 2328-40.
8. Gajewski, B. J., Simon, S.D. A One-Hour Introduction to Bayesian Data Analysis for Non-Statisticians. *The American Statistician* 2008: 62(3): 190-194.
9. Graf WD, Kayyali HR, Alexander JJ, Simon SD, Morriss MC. Neuroimaging-use trends in nonacute pediatric headache before and after clinical practice parameters. *Pediatrics.* 2008 Nov;122(5):e1001-5. Epub 2008 Oct 6.

10. Knapp JF, Simon SD, Sharma V. Quality of care for common pediatric respiratory illnesses in United States emergency departments: analysis of 2005 National Hospital Ambulatory Medical Care Survey Data. *Pediatrics*. 2008 Dec;122(6):1165-70.
11. Sati, L., Ovari, L., Bennett, D., Simon, S. D., Demir, R., Huszar, G. Double probing of human spermatozoa for persistent histones, surplus cytoplasm, apoptosis and DNA fragmentation. *Reprod Biomed Online* 2008: 16(4): 570-9.
12. Schurman JV, Danda CE, Friesen CA, Hyman PE, Simon SD, Cocjin JT. Variations in psychological profile among children with recurrent abdominal pain. *J Clin Psychol Med Settings*. 2008 Sep;15(3):241-51. Epub 2008 Jul 25.
13. Jones BL, Abdel-Rahman SM, Simon SD, Kearns GL, Neville KA. Assessment of Histamine Pharmacodynamics by Microvasculature Response of Histamine Using Histamine Iontophoresis Laser Doppler Flowimetry. *J Clin Pharmacol*. 2009;49(5):600-605. [Medline]
14. Midyett LK, Grunt J, Simon SD. Noninvasive radial artery tonometry augmentation index and urinary albumin/creatinine levels in early adolescents with type 1 diabetes mellitus. *J. Pediatr. Endocrinol. Metab*. 2009;22(6):531-537. [Medline]
15. Miller MK, Dowd MD, Gratton MC, Cai J, Simon SD. Pediatric out-of-hospital emergency medical services utilization in Kansas City, Missouri. *Acad Emerg Med*. 2009;16(6):526-531. [Medline]
16. Mercer AM, Teasley SL, Hopkinson J, McPherson DM, Simon SD, Hall RT. Evaluation of a breastfeeding assessment score in a diverse population. *J Hum Lact*. 2010;26(1):42-48.

D. Research Support

Ongoing Research Support

NIH/NCRR KL2 RR033177 & UL1 RR033179, Miller, Melissa, 08/15/2011 – 08/14/2012

Health Educators in the Emergency Department to Improve Sexual Health Care for Adolescents

Our objective in this application is to develop an ED-based intervention for adolescents aged 14-19 years that will increase access to care, provide more timely detection of STIs and pregnancy, and ultimately reduce adolescents' risk for STIs and unintended pregnancies.

Role: Consultant

Completed Research Support

NDNQI Services Agreement Work Order No. 3 (Dunton). 02/01/2008 – 05/01/2008. American Nurses Association-Kansas University Medical Center Research Institute. The major goals of this project are to develop a method for unit-based acuity adjustment and to develop a method to calculate hospital level indicators.

Role: Co-Investigator

CAM, Medical Service Utilization, and Quality of Care among Patients with Musculoskeletal Conditions (Lafferty). 11/01/2010 - 08/31/2011. To inform health policy decision making at the individual and societal level by assessing the effect of complementary and alternative medicine (CAM) provider use on three primary outcomes: costs, service utilization, and quality of care for the treatment of musculoskeletal conditions.

Role: Co-Investigator

Sex, SLE, and Signal Transduction (AR50878-01. Principal Investigator: Jill Jacobson). Funded by NIH/NIAID from 12/01/01 through 11/30/06. Total direct costs of \$250,000 in 2002. I was funded at 5% effort for the entire duration of this grant. The major goal of this project is to demonstrate that the increase in immune responsiveness to gonadotropin-releasing hormone in female mice plays a pivotal role in increased incidence of autoimmune disease.

Role: Co-Investigator

Program Director/Principal Investigator (Last, First, Middle):

Pediatric Pharmacology Research Unit (HD31313-09. Principal Investigator: Greg Kearns). Funded by NIH/NICHD from 01/01/1994 through 12/31/2003. Total direct costs of \$361,932 in 2002. I was funded at 3% effort from May 1996 to December 2003. The major goal of this project is to conduct basic and translational research focusing on regulatory events in pharmacogenetics, the ontogeny of important drug metabolizing enzymes, and pharmacodynamics that will advance our understanding of age-related differences in drug disposition and action.

Role: Co-Investigator