

Curriculum Vita

Gary R. Sullivan, Ph.D.

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Professional Experience

Espirer Consulting, LLC

Leadership Specialist and Statistical Scientist, Member and Founder, April 2018 to Present

- Primary developer and instructor for 2018 ASA leadership initiative; leadership courses on Cultural Competence, Decision Analytics, and Executive Presence developed and taught in 2018-2019;
- Primary developer and instructor for *The Effective Statistician Leadership Program*, on-line leadership course for statisticians in the pharmaceutical industry; 1st offering successfully administered 2019; 2nd offering in-progress;
- Adjunct professor, Purdue University; *Leadership Development for Statisticians* developer and instructor, 2019 winter semester;

Eli Lilly & Company, Indianapolis, Indiana

Senior Director, Global Statistical Sciences, January 2010 to Present

- Responsibility for 45 statisticians in Discovery Research, Product Research & Development, Pharmacogenomics, Manufacturing Science & Technology, and Animal Health;
- Providing leadership, project resourcing, technical guidance, career development, reward & recognition;
- Driving strategy into the businesses and functions listed above;
- Technical reviewer/approver for CM&C submissions and/or regulatory response for multiple portfolio products
- Co-Leader/Leader of Global Statistical Sciences/Biometrics Leadership Development program; See below for ASA and other leadership development training experience
- Developed and instituted Quality Principles as a foundation for judgment-based decision-making and Quality System foundation in statistics function;

Head/Director, Global Discovery & Development Statistics, October 2005 to December 2009

- Responsibility for 25 discovery & development statisticians at multiple sites;
- Providing leadership, technical guidance and career development;
- Leveraged focus group information to gain support for supply chain optimization headcount;
- Established variability awareness in discovery: gained sponsorship, initiated bioavailability variability assessment, organized/facilitated five one-day training sessions by global expert;
- Instituted outsourcing of project statistician work for discovery & product development;
- Co-leader of Global Statistical Sciences Leadership Development program;

Head, Manufacturing Science & Technology – Statistics, September 2002 to September 2005

- Responsibility for 25+ statisticians at over 10 global manufacturing sites;
- Providing leadership, technical guidance and career development;
- Revamped control charting to focus on critical product measures reducing unnecessary deviations by 80%;

- Initiated and lead the development of Global Manufacturing statistics curriculum;
- Implemented senior review program for Global Statistical Sciences;

Research Scientist/ Senior Research Scientist, Bioprocess Research & Development, March, 1995 to August, 2002

- Statistical leader for API process development for all bioproducts in development portfolio;
- Statistical leadership in the development and optimization of Automated Cell Selection platform;
- Optimization and improvement of strain development processes for multiple natural products;
- Owner & lead developer of experimental design training courses administered to over 500 scientists;
- Laid the foundation for current *quality by design* and bioprocess development platform in BPD;

Senior Scientist, Statistical Sciences, October 1989 to February, 1995

- Responsible for providing statistical support for multiple areas of product & process development, and manufacturing;
- Statistical leader in pharmaceutical development for all small molecule formulations;
- Lead statistician supporting Animal Health Products;

Iowa State University

Research Assistant, Survey Section of Statistical Laboratory 1984-1989

- Primary developer of PCCARP, Survey data analysis package for microcomputers
- Contributor to EVCARP, Regression program for errors in variables models
- Teaching assistant, Econometrics (graduate level advanced regression course)

Education

Ph.D. Statistics	December 1989	
	Iowa State University, Ames, Iowa	Advisor: Dr. Wayne A. Fuller
M.S. Statistics	August 1986	
	Iowa State University, Ames, Iowa	Advisor: Dr. William J. Kennedy
B.S. Statistics	May 1984	
	University of Pittsburgh	Advisor: Dr. Alan Sampson

Professional Affiliations/Honors

American Statistical Association: 1986 to Present

- Ad Hoc Member, Advisory Committee for ASA Leadership Institute (2018)
- Chair: ASA Ad Hoc Leadership Development Committee (2017-2018)
- Proposed and taught 1st-ever Leadership Training Class for ASA (2014)

Mu Sigma Rho Statistical Honor Society

PACE Recipient (Iowa State University, 1984-1985)

Teplitz Memorial Scholarship (University of Pittsburgh, 1983-1984)

Leadership Development of Statisticians

Course Instruction

- Sullivan, G.R. and Schacht A. *The Effective Statistician Leadership Program* (On-line 24 week program), February-August 2019 and November 2019-May-2020.
- Sullivan, G.R. and Chen, F. Continuing Education: Preparing Statisticians for Leadership: How to Improve Your Business Acumen and Influence, Washington Statistical Society, Washington D.C., July, 2019.
- Sullivan, G.R., Meyerson, L., and LaLonde, D. ASA Leadership Initiative: Leading with Executive Presence, ASA Headquarters, Alexandria, VA. May, 2019.
- Sullivan, G.R., Price, K., and LaLonde, D. ASA Leadership Initiative: Leading with Decision Analytics, On-Line training, January, 2019.
- Sullivan, G.R. Continuing Education: Preparing Statisticians for Leadership: How to Improve Your Business Acumen and Influence, Washington Statistical Society, Washington D.C., November, 2018.
- Sullivan, G.R., Wang, W., and LaLonde, D. ASA Leadership Initiative: Leading with Cultural Competence, ASA Headquarters, Alexandria, VA. October, 2018.
- Sullivan, G.R. and LaFleur, B. Continuing Education: Preparing Statisticians for Leadership: How to Improve Your Business Acumen and Influence, Joint Statistical Meetings, Vancouver, Canada, July, 2018.
- Sullivan, G.R., and Chen, F. Continuing Education: Preparing Statisticians for Leadership: How to Improve Your Business Acumen and Influence, North Carolina Chapter of the American Statistical Association, Cary, NC, March, 2018.
- Sullivan, G.R., and Gurka, M. Continuing Education: Becoming a Student of Leadership in Statistics, Conference on Statistical Practice, Jacksonville, FL, February, 2017.
- Sullivan, G.R., and Grover, V. Continuing Education: Preparing Statisticians for Leadership: How to Improve Your Business Acumen and Influence, Joint Statistical Meetings, Chicago, IL, July, 2016.
- Sullivan, G.R., LaFleur, B. and Seastrom, M. Continuing Education: Preparing Statisticians for Leadership: How to Improve Your Business Acumen and Influence, Joint Statistical Meetings, Boston, MA, August, 2014.

Articles and Outreach

- Sullivan, G.R. "Reaching Your Potential as a Statistician and Leader," SAS Global Forum 2020 Proceedings
- Sullivan, G.R. "Busting Some Myths About Statistical Leadership," Biopharmaceutical Report of the ASA Biopharmaceutical Section, Volume 27, Winter 2020.
- Sullivan, G.R. "Statisticians, Leadership and Teamwork – Understanding Effective Teamwork and the Leadership Opportunities for Statisticians," 2019 Midwest Biopharmaceutical Society Workshop, Carmel, Indiana, May, 2019.
- Florance, A.(Organizer), Sullivan, G.R. (Speaker and Panelist) et al. "Statistical Leadership – It's Importance, Imperatives and Impacts," 2018 BioPharmaceutical Section Regulatory-Industry Statistics Workshop, Washington, D.C., September, 2018.
- Sullivan, G.R. "Being Your Best as a Statistician: Getting a Jump on Leadership Development," Graduate Student Seminar at Purdue University, Department of Statistics, April, 2018.
- Sullivan, G.R. and Otto, M. "JSM Session: The Leadership Journey for Statisticians," Stat Tr@k, AmStat News, March, 2018.
- Gary R Sullivan, Eli Lilly and Company (Organizer & Facilitator), Nancy Geller, National Institutes of Health, Stacy Lindborg, Biogen, F. DuBois Bowman, Columbia University,

- Robert N. Rodriguez, SAS Institute. "The Leadership Journey for Statisticians," invited panel at the Joint Statistical Meetings, Baltimore, MD, August, 2017.
- Sullivan, G.R. *Leadership and Women in Statistics: Leadership Development in the Workplace* (Invited Chapter). Chapman and Hall, 2015.
- Sullivan, G.R. "Leadership Development for Statisticians – Let's Take the Time!," AmStat News, October, 2013.
- Sullivan, G.R. (Facilitator), Leadership Development Roundtable, NonClinical Biostatistics Conference, Philadelphia, PA, October, 2013.
- Sullivan, G.R., Berg, P., Toledo-Marquette, S. Leadership Development Webcast, <http://www.amstat.org/ASA/Your-Career/Career-Planning-and-Leadership-Videos.aspx> ASA Website (Under *Your Career - Professional Development Resources*) Created May, 2013.
- Berg, P., and Sullivan, G.R. "Leadership Development in Statistics," Joint Statistical Meetings, Vancouver, Canada, August, 2010

Lilly Committee Assignments and Team Responsibilities

- Gelatin Capsule Crosslinking Team: 1993
- Ceclor Dissolution Task Force Team: 1995-1996
- 1996 Eli Lilly Statistics Conference Planning Team (Chairperson): 1996
- IBO Statistical Steering Team: 1998
- Environmental Monitoring Statistical Analysis Core Team (Leader): 2001
- BR&D Quality Lead Team (Facilitator): 2002
- Statistics Research Titles Committee Chair, 2005, 2010-2013
- Senior Reviews for Statistics (Chair), 2005-2006
- Six Sigma/Statistics Collaboration Team (Sponsor), 2006-2007
- Statistics Leadership Strategy (Co-Leader & Leader), 2008-2017
- Quality Principles in Global Statistical Sciences (Leader), 2011-2014
- Biometrics Diversity Initiative, 2017

Statistical Publications

- Weisman, D.A., Sullivan, G.R. et al (2005). "In defense of USP Singlet Testing," *Pharmaceutical Technology*, Vol 29, No. 9, p. 2.
- Sullivan, G.R., and Cockshott, A.R. (2001). "Improving the Fermentation Medium of Echinocandin B production. Part I: Sequential Statistical Experimental Design," *Process Biochemistry*, Vol. 36, pp. 647-660.
- Strobel, R.J., and Sullivan, G.R. (1999). *Manual of Industrial Microbiology and Biotechnology, Second Edition: Experimental Design for Improvement of Fermentations* (Invited Chapter). ASM Press, Washington D.C.
- Zmijewski, M.J., Sullivan, G.R. et al (1997). "Kinetic Resolution: Evaluation of a One Dimensional E value Calculation Method using a Computer and Statistical Software," *Tetrahedron: Asymmetry*, 18:1153.
- Olsen, B.A., and Sullivan, G.R., (1995). "Chemometric Categorization of Octadecylsilyl bonded-phase silica columns using test mixtures and confirmation of results with pharmaceutical compound separations," *Journal of Chromatography A*, 692, pp. 147-159.

- Beals, J. M., Sullivan, G.R. et al, (1995). "Reversible Adsorption of Soluble Hexameric Insulin onto the Surface of Insulin Crystals Cocrystallized with Protamine: An Electrostatic Interaction," *Pharmaceutical Research*, Vol. 12, No. 1, pp. 60-68.
- Hartauer, K.J., Sullivan G.R. et al, (1992). "The Effect of Rayon Coiler on the Dissolution Stability of Hard-Shell Gelatin Capsules," *Pharmaceutical Technology*, Vol. 17, No. 6.
- Sullivan, G. R. and Fuller, W. A. (1990). "Construction of Masking Error for Categorical Variables," *Proceedings of the Section on Survey Research Methods*, Anaheim, CA, American Statistical Association.
- Sullivan, G.R. and Fuller, W. A. (1989). "The Use of Measurement Error to Avoid Disclosure," *Proceedings of the Section on Survey Research Methods*, Washington, D.C., American Statistical Association.

Statistical Presentations

- Sullivan, G.R. "Recent Developments in Statistical Experimental Design," Annual Meeting of the Society for Industrial Microbiology, St. Louis, MO, August 2001.
- Sullivan, G.R. "Modified Box-Behnken Designs for Three and Four Factors," Spring Research Conference, Seattle, WA, June 2000.
- Sullivan, G.R. and Kaiser, R.E. "Experimenting with Experimentation: Taking Science to New Heights," 1996 Hoosier Association of Science Teachers Incorporated (HASTI) Conference, Indianapolis, IN, February, 1996.
- Sullivan, G. R. "Training the Scientist in the Techniques of Designed Experimentation," Annual Meeting of the Biostatistics Subsection of the Pharmaceutical Manufacturers Association, San Antonio, TX, October, 1992.
- Sullivan, G. R. and Fuller, W. A. "Construction of Masking Error for Categorical Variables," Joint Statistical Meetings, Anaheim, CA, August, 1990.
- Sullivan, G.R. and Fuller, W. A. "The Use of Measurement Error to Avoid Disclosure," Joint Statistical Meetings, Washington D.C., August, 1989.