

Curriculum Vitae
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University of Minnesota
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Education

Ph.D. Columbia University, 2000, Statistics
M.A. New School for Social Research, 1995, Economics
B.S. University of Minnesota, 1993, Sociology

Experience

2016–present: Associate Director of the Coordinating Centers for Biometric Research
2007–present: Associate Professor, Biostatistics, University of Minnesota
2007–present: Associate Professor, Bioinformatics and Computational Biology, University of Minnesota
2000–2007: Assistant Professor, Biostatistics, University of Minnesota
2001–2007: Member of graduate faculty in Bioinformatics, University of Minnesota
1997–2000: Preceptor, Statistics, Columbia University

Honors and Awards

2000 Award for exemplary application for Grant in aid of artistry and research, University of Minnesota
2000 John van Ryzin memorial Award for outstanding dissertation in Statistics and Biostatistics

Publications in peer-reviewed journals

1. Reilly C, Gelman A, Katz J (2001), “Post-stratification without population level information on the post-stratifying variable, with application to political polling”, *Journal of American Statistical Association*, 96, 1–12.
2. Schacker TW, Nguyen P, Beilman G, Wolinsky S, Larson M, Reilly C, Haase AT (2002) “The impact of inflammation and fibrosis in the T cell zone niche of secondary lymphatic tissues on immune reconstitution during HIV-1 infection”, *Journal of Clinical Investigation*, 110, 1133–1139.
3. Schacker TW, Nguyen P, Martinez E, Reilly C, Gatell JM, Horban A, Bakawska E, Berzins B, van Leeuwen R, Wolinsky S, Haase AT, Murphy RL (2002), “Persistent abnormalities in lymphoid tissues of HIV-infected persons on highly active anti-retroviral therapy”, *Journal of Infectious Diseases*, 186, 1092–1097.
4. Reilly C, Haase AT, Schacker TW, Krason D, Wietgreffe S (2002), “The clustering of infected SIV cells in lymphoid tissue”, *Journal of American Statistical Association*, 97, 943–954.

5. Raghavan A, Ogilvie R, Reilly C, Abelson M, Robison R, Raghavan S, Vasdewani J, Krathwohl M, Bohjanen P (2002), “Global analysis of mRNA decay in T cells”, *Nucleic Acids Research*, 30, 5529–5538.
6. Reilly C, Wang C, Rutherford M (2003), “Normalization of microarrays using the transcripts that are not differentially expressed”, *The Journal of the American Statistical Association*, 98, 868–878.
7. Zhang Z, Wietgreffe S, Li Q, Shore M, Lljie D, Reilly C, Lifson J, Haase AT (2004), “The roles of target cell availability, susceptibility and productive infection of resting and activated CD4+ T cells in transmission and acute SIV infection”, *Proceedings of the National Academy of the Sciences*, 101, 5640–5645.
8. Reilly C, Wang C, Rutherford M (2005), “A method for the comparison of cluster analyses”, *Statistica Sinica*, 15, 19–34.
9. Reilly C, Price P, Gelman A, Sandgrathe S (2005), “Using image and curve registration for measuring the goodness of fit of spatial and temporal predictions”, *Biometrics*, 60, 954–964.
10. Reilly C (2005), “Non-parametric longitudinal analysis via a set of survival problems with application to the analysis of microarrays”, *Biostatistics*, 6, 271–278.
11. Li Q, Duan L, Estes J, Ma Z-M, Rourke T, Wang Y, Reilly C, Carlis J, Miller C, Haase AT (2005), “Peak SIV replication in resting memory CD4+ T cells depletes gut lamina propria CD4+ T cells”, *Nature*, 435.
12. Vlasova I, McNabb J, Raghavan A, Reilly C, Williams D, Bohjanen P (2005), “Coordinate stabilization of growth-regulatory transcripts in T cell malignancies”, *Genomics*, 86, 159–171.
13. Li Q, Lifson J, Schacker TW, Estes J, Duan L, Reilly C, Carlis J, Liaw L, Haase AT (2005), “Potential roles for follicular dendritic cell associated osteopontin in lymphoid follicles and B cell regulation in HIV-1 and SIV infections”, *Journal of Infectious Disease*, 197, 1269–1276.
14. Schacker TW, Reilly C, Beilman G, Taylor J, Skarda D, Krason D, Larson M, Haase AT (2005), “Amount of lymphatic tissue fibrosis in HIV infection predicts magnitude of HAART associated change in peripheral CD4 cell count”, *AIDS*, 19, 2169–2171.
15. Chen R, Yokoyama M, Sato H, Reilly C, Mansky L (2005), “HIV mutagenesis during antiretroviral therapy: Impact of drug resistant reverse transcriptase and nucleoside and nonnucleoside reverse transcriptase inhibitors on HIV-1 mutation frequencies”, *Journal of Virology*, 79, 12045-12057.
16. Smith J, Schmechel S, Raghavan A, Abelson M, Reilly C, Katze M, Kaufman R, Bohjanen P, Schiff L (2006), “Reovirus induces and benefits from an integrated cellular stress response”, *Journal of Virology*, 80, 2019–2033.
17. Estes J, Li Q, Reynolds MR, Wietgreffe S, Duan L, Shacker T, Picker L, Watkins D, Lifson J, Reilly C, Carlis J, Haase AT (2006), “Premature induction of an immunosuppressive regulatory T cell response during acute SIV infection”, *Journal of Infectious Disease*, 193, 703–712.
18. Nordgaard CL, Berg KM, Kapphahn RJ, Reilly C, Feng X, Olsen TW, Ferrington DA (2006), “Proteomics of the retinal pigment epithelium reveals altered protein expression at progressive stages of age-related macular degeneration”, *Investigative Ophthalmology and Visual Science*, 47, 815–822.

19. Hataye J, Moon JJ, Khoruts A, Reilly C, Jenkins M (2006), "Naive and memory CD4+ T cell survival controlled by clonal abundance", *Science*, 312, 114–116.
20. Schacker, TW, Brenchley JM, Beilman GJ, Reilly C, Nguyen PL, Taylor J, Skarda D, Larson M, Douek DC, Haase AT (2006), "Lymphatic tissue fibrosis contributes to reduced numbers of naive CD4+ T cells in HIV-1 infection", *Clinical and Vaccine Immunology*, 13, 5:556–560.
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22. Reilly C, Raghavan A, Bohjanen P (2006), "Global assessment of cross-hybridization for oligonucleotide arrays", *Journal of Microbiological Techniques*, 17, 163–172.
23. Ethan C, Reilly C, Feng X, Olsen TW, Ferrington DA (2006), "The proteome of central and peripheral retina with progression of age-related macular degeneration", *Investigative Ophthalmology and Visual Science*, 47, 2280–2209.
24. Lu H, Reilly C, Banerjee S, Carlin BP (2006), "Bayesian areal wombling via adjacency modeling", *Environmental and Ecological Statistics*, 14, 433–452.
25. Skinner P, Abbassi H, Cheseboro B, Race R, Reilly C, Haase AT (2006), "Comparison of gene expression alterations in the brains of mice infected with three different strains of Scrapie", *BMC Genomics*, 7, 114.
26. Hau H, Walsh R, Ogilvie R, Williams D, Reilly C, Bohjanen P (2006), "Tristetraprolin recruits functional mRNA decay complexes to ARE sequences", *Journal of Cellular Biochemistry*, 100(6); 1477–1492.
27. Larsson O, Perlman DM, Fan D, Reilly C, Peterson M, Dahlgren C, Liang Z, Li S, Polunovsky VA, Wahlestedt C, Bitterman P (2006), "Apoptosis resistance downstream of eIF4E: posttranscriptional activation of an anti-apoptotic transcript carrying a consensus hairpin structure", *Nucleic Acids Research*, 34, 4375–4386.
28. Reilly C, Zhang Q, Wietgreffe S, Haase AT (2006), "Estimation of relative viral production of activated and non-activated CD4+ T cells", *AIDS*, 21(2): 163–168.
29. Estes JD, Wietgreffe S, Schacker TW, Southern P, Beilman G, Reilly C, Milush JM, Lifson JD, Sodora DL, Carlis JV, Haase AT (2007), "Simian immunodeficiency virus-induced lymphatic tissue fibrosis is mediated by transforming growth factor Beta-1 positive regulatory T cells and begins in early infection", *Journal of Infectious Diseases*, 195(4): 551–561.
30. Reilly C, Gelman A (2007), "Weighted variogram estimation for data with clustering", *Technometrics*, 49(2), 184–194.
31. Reilly C, Miller MB, Liu Y, Oetting WS, King R, Blumenthal M (2007), "Linkage analysis of a cluster-based quantitative phenotype constructed from pulmonary function test data in 27 multigenerational families with multiple asthmatic members", *Human Heredity*, 64(2), 136–145.
32. Ethen C, Hussong SA, Reilly C, Feng X, Olsen TW, Ferrington DA (2007), "Transformation of the proteasome with age-related macular degeneration", *FEBS Letters*, 581, 885–890.
33. Ethan C, Reilly C, Feng X, Olsen TW, Ferrington DA (2007), "Age-related macular degeneration and retinal protein modification by 4-hydroxy-2-nonenal", *Investigative Ophthalmology and Visual Science*, 48, 3469–3479.

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35. Li M, Reilly C (2008), "Assessing the quality of hybridized RNA in Affymetrix GeneChips using linear regression". *The Journal of Biomolecular Techniques*, 19(2), 122–128.
36. Li M, Reilly C, Hanson T (2008), "A semiparametric test to detect associations between quantitative traits and candidate genes in structured populations". *Bioinformatics*, 24(20), 2356–2362.
37. Vlasova IA, Tahoe NM, Fan D, Larsson O, Rattenbacher B, Sternjohn JR, Vasdewani J, Karypis G, Reilly C, Bitterman PB, Bohjanen PR (2008), "Conserved GU-rich elements mediate mRNA decay by binding to CUG-binding protein 1". *Molecular Cell*, 29(2), 263–270.
38. Baker JV, Peng G, Rapkin J, Krason D, Reilly C, Cavert WP, Abrams DI, MacArthur RD, Henry K, Neaton JD; Terry Bein Community Programs for Clinical Research on AIDS (CPCRA). (2008), "Poor initial CD4+ recovery with antiretroviral therapy prolongs immune depletion and increases risk for AIDS and non-AIDS diseases". *The Journal of Acquired Immune Deficiency Syndrome*, 48(5), 541–546.
39. Estes J, Baker JV, Brenchley JM, Khoruts A, Barthold JL, Bantle A, Reilly CS, Beilman GJ, George ME, Douek DC, Haase AT, Schacker TW (2008), "Collagen deposition limits immune reconstitution in the gut". *Journal Infectious Disease*, 198(4), 456–464.
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42. Kong X, Reilly C. (2009), "A Bayesian approach to the alignment of mass spectra", *Bioinformatics*, 25(24):3213–3220.
43. Li Q, Skinner PJ, Ha SJ, Duan L, Mattila TL, Hage A, White C, Barber DL, O'Mara L, Southern PJ, Reilly CS, Carlis JV, Miller CJ, Ahmed R, Haase AT (2009), "Visualizing antigen-specific and infected cells in situ predicts outcomes in early viral infection", *Science*, 323(5922), 1726–1729.
44. Li Q, Estes JD, Schlievert PM, Duan L, Brosnahan AJ, Southern PJ, Reilly CS, Peterson ML, Schultz-Darken N, Brunner KG, Nephew KR, Pambuccian S, Lifson JD, Carlis JV, Haase AT (2009), "Glycerol monolaurate prevents mucosal SIV transmission", *Nature*, 458(7241), 1034–1038.
45. Xiao G, Reilly C, Khodursky AB (2009), "Improved detection of differentially expressed genes through incorporation of gene locations", *Biometrics*, 65(3), 805–814.
46. Smith AJ, Schacker TW, Reilly C, Haase AT (2010), "A role for syndecan-1 and claudin-2 in microbial translocation during HIV-1 infection", *Journal of Acquired Immune Deficiency Syndrome*, 55(3), 306–315.

47. Winstead CJ, Reilly CS, Moon JJ, Jenkins MK, Hamilton SE, Jameson SC, Way SS, Khoruts A (2010), “CD4+CD25+Foxp3+ regulatory T cells optimize diversity of the conventional T cell repertoire during reconstitution from lymphopenia”, *Journal of Immunology*, 184(9), 4749–4760.
48. Li M, Reilly C, Hanson T (2010), “Association tests for a censored quantitative trait and candidate gene in structured populations with multilevel genetic relatedness”, *Biometrics*, 66(3), 925–933.
49. Smith AJ, Li Q, Wietgreffe SW, Schacker TW, Reilly CS, Haase AT (2010), “Host genes associated with HIV-1 replication in lymphatic tissue”, *Journal of Immunology*, 185(9), 5417–5424.
50. Zeng M, Smith AJ, Wietgreffe SW, Southern PJ, Schacker TW, Reilly CS, Estes JD, Burton GF, Silvestri G, Lifson JD, Carlis JV, Haase AT (2011), “Cumulative mechanisms of lymphoid tissue fibrosis and T cell depletion in HIV-1 and SIV infections”, *Journal of Clinical Investigation*, 121(3), 998–1008.
51. Smith AJ, Toledo CM, Wietgreffe SW, Duan L, Schacker TW, Reilly CS, Haase AT. (2011), “The immunosuppressive role of IL-32 in lymphatic tissue during HIV-1 infection”, *Journal of Immunology*, 186(11), 6576–1684..
52. Dwyer DE; INSIGHT Influenza Study Group. (2011), “Surveillance of illness associated with pandemic (H1N1) 2009 virus infection among adults using a global clinical site network approach: the INSIGHT FLU 002 and FLU 003 studies”, *Vaccine*, 29 Suppl 2:B56–62.
53. Reilly C, Cervenka T, Hertz MI, Becker T, Wendt CH. (2011), “Human neutrophil peptide in lung chronic allograft dysfunction”, *Biomarkers*, 16(8), 663-9.
54. Zeng M, Southern PJ, Reilly CS, Beilman GJ, Chipman JG, Schacker TW, Haase AT. (2012), “Lymphoid tissue damage in HIV-1 infection depletes naive T cells and limits T cell reconstitution after antiretroviral therapy”, *PLoS Pathogen*, 8(1), e1002437.
55. Pragman AA, Kim HB, Reilly CS, Wendt C, Isaacson RE. (2012), “The lung microbiome in moderate and severe chronic obstructive pulmonary disease”, *PLoS One*, 7(10), e47305.
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58. Sasikala-Appukuttan AK, Kim HO, Kinzel NJ, Hong JJ, Smith AJ, Wagstaff R, Reilly C, Piatak M Jr, Lifson JD, Reeves RK, Johnson RP, Haase AT, Skinner PJ. (2013), “Location and dynamics of the immunodominant CD8 T cell response to SIV Δ nef immunization and SIVmac251 vaginal challenge”, *PLoS One*, 8(12), e81623.
59. Stone MD, Harvey SB, Nelsestuen GL, Reilly C, Hertz MI, Wendt CH. (2014), “Elevated peptides in lung lavage fluid associated with bronchiolitis obliterans syndrome”, *PLoS One*, (9)1, e84471.

60. Fletcher CV, Staskus K, Wietgreffe SW, Rothenberger M, Reilly C, Chipman JG, Beilman GJ, Khoruts A, Thorkelson A, Schmidt TE, Anderson J, Perkey K, Stevenson M, Perelson AS, Douek DC, Haase AT, Schacker TW. (2014), “Persistent HIV-1 replication is associated with lower antiretroviral drug concentrations in lymphatic tissues”, *Proceedings of the National Academy of the Science U S A.*, 111(6), 2307-2312.
61. Reilly C, Rasmussen K Selberg T, Stevens J, Jones RS (2014), “Biofilm community diversity after exposure of 0.4% stannous fluoride gels”, *Journal of Applied Microbiology*, 117, 1798–1809.
62. Laguna TA, Williams CB, Brandy KR, Welchlin-Bradford C, Moen CE, Reilly CS, Wendt CH (2014), “Sputum club cell protein concentration is associated with pulmonary exacerbation in cystic fibrosis”, *Journal of Cystic Fibrosis*, S1569-1993(14), 00229-X.
63. Refsland EW, Hultquist JF, Luengas EM, Ikeda T, Shaban NM, Law EK, Brown WL, Reilly C, Emerman M, Harris RS (2014), “Natural polymorphisms in human APOBEC3H and HIV-1 Vif combine in primary T lymphocytes to affect viral G-to-A mutation levels and infectivity”, *PLoS Genetics*, 10(11), e1004761.
64. Sanchez JL, Hunt PW, Reilly CS, Hatano H, Beilman GJ, Khoruts A, Jasurda JS, Somsouk M, Thorkelson A, Russ S, Anderson J, Deeks SG, Schacker TW (2014), “Lymphoid fibrosis occurs in long-term nonprogressors and persists with antiretroviral therapy but may be reversible with curative interventions”, *Journal of Infectious Disease*, 211(7), 1068–1075.
65. Estes JD, Reilly C, Trubey CM, Fletcher CV, Cory TJ, Piatak M Jr, Russ S, Anderson J, Reimann TG, Star R, Smith A, Tracy RP, Berglund A, Schmidt T, Coalter V, Chertova E, Smedley J, Haase AT, Lifson JD, Schacker TW (2014), “Antifibrotic therapy in simian immunodeficiency virus infection preserves CD4+ T-cell populations and improves immune reconstitution with antiretroviral therapy”, *Journal of Infectious Disease*, 211(5), 744–754.
66. Smith AJ, Wietgreffe SW, Shang L, Reilly CS, Southern PJ, Perkey KE, Duan L, Kohler H, Müller S, Robinson J, Carlis JV, Li Q, Johnson RP, Haase AT (2014), “Live simian immunodeficiency virus vaccine correlate of protection: immune complex-inhibitory Fc receptor interactions that reduce target cell availability”, *Journal of Immunology*, 193(6), 3126–3133.
67. Li Q, Zeng M, Duan L, Voss JE, Smith AJ, Pambuccian S, Shang L, Wietgreffe S, Southern PJ, Reilly CS, Skinner PJ, Zupancic ML, Carlis JV, Piatak M Jr, Waterman D, Reeves RK, Masek-Hammerman K, Derdeyn CA, Alpert MD, Evans DT, Kohler H, Müller S, Robinson J, Lifson JD, Burton DR, Johnson RP, Haase AT (2014), “Live simian immunodeficiency virus vaccine correlate of protection: local antibody production and concentration on the path of virus entry”, *Journal of Immunology*, 193(6), 3113–3125.
68. Beisang D, Reilly C, Bohjanen PR (2014), “Alternative polyadenylation regulates CELF1/CUGBP1 target transcripts following T cell activation”, *Gene*, 550(1), 93–100.
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70. Laguna T, Reilly C, Williams CB, Welchlin C, Wendt CH (2015), “Metabolomics Analysis Identifies Novel Plasma Biomarkers of Cystic Fibrosis Pulmonary Exacerbation”, *Pediatric Pulmonology*, 50(9), 869–877.

71. Haase AT, Rakasz E, Schultz-Darken N, Nephew K, Weisgrau KL, Reilly CS, Li Q, Southern PJ, Rothenberger M, Peterson ML, Schlievert PM. (2015), "Glycerol monolaurate microbicide protection against repeat high-dose SIV vaginal challenge", *PLoS One*, 10(6), e0129465.
72. Skinner PJ, Kim HO, Bryant D, Kinzel NJ, Reilly C, Priola SA, Ward AE, Goodman PA, Olson K, Seelig DM (2015), "Treatment of prion disease with heterologous prion proteins", *PLoS One*, 10(7), e0131993.
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74. Rawson JM, Landman SR, Reilly CS, Mansky LM (2015), "HIV-1 and HIV-2 exhibit similar mutation frequencies and spectra in the absence of G-to-A hypermutation", *Retrovirology*, 12, 60.
75. Rawson JM, Landman SR, Reilly CS, Bonnac L, Patterson SE, Mansky LM (2015), "Lack of mutational hotspots during dicitabine-mediated HIV-1 mutagenesis", *Antimicrobial Agents and Chemotherapy*, 59(11), 6834–6843.
76. Pragman A, Isaacson R, Wendt C, Reilly C (2015), "A method for determining taxonomical contributions to group differences in microbiomic investigations", *Journal of Computational Biology*, 22(10), 930–939.
77. Rudney JD, Jagtap PD, Reilly CS, Chen R, Markowski TW, Higgins L, Johnson JE, Griffin TJ (2015), "Protein relative abundance patterns associated with sucrose-induced dysbiosis are conserved across taxonomically diverse oral microcosm biofilm models of dental caries", *Microbiome*, 3(1) 69.
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79. Rasmussen K, Nikrad J, Reilly C, Li Y, Jones R (2016), "N-Acetyl-L-cysteine effects on multi-species oral biofilm formation and bacterial ecology", *Letters in Applied Microbiology*, 62(1), 30–38.
80. Rawson JM, Daly MB, Xie J, Clouser CL, Landman SR, Reilly CS, Bonnac L, Kim B, Patterson SE, Mansky LM (2016), "5-azacytidine enhances the mutagenesis of HIV-1 by reduction to 5-aza-2'-deoxycytidine", *Antimicrobial Agents Chemotherapy*, 60(4), 2318-2325
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84. Enns EA, Reilly CS, Virnig BA, Baker K, Vogenthaler N, Henry K (2016), "Potential impact of integrating HIV surveillance and clinic data on retention-in-care estimates and re-engagement efforts", *AIDS Patient Care STDS*, 30(9):409-15.

85. Gulcev M, Reilly C, Griffin TJ, Broeckling CD, Sandri BJ, Witthuhn BA, Hodgson SW, Woodruff PG, Wendt CH (2016), "Tryptophan catabolism in acute exacerbations of chronic obstructive pulmonary disease", *International Journal of Chronic Obstructive Pulmonary Disease*, 11, 2435-2446.
86. Pettitt J, Higgs E, Fallah M, Nason M, Stavale E, Marchand J, Reilly C, Jensen K, Dighero-Kemp B, Tuznik K, Logue J, Bolay F, Hensley L (2016), "Assessment and optimization of the GeneXpert diagnostic platform for detection of Ebola virus RNA in seminal fluid", *Journal of Infectious Disease*, pii: jiw599. doi: 10.1093/infdis/jiw599.
87. Shang K, Reilly C (2017), "Nonparametric Bayesian analysis of the 2 sample problem with censoring", in press *Communications in Statistics: Theory and Methods*.

Book Chapters

1. Reilly C, Zeringue A. (2004), "Improved predictions of lynx trappings using a Biological model", in 2004 *Applied Bayesian Modeling and Causal Inference from Incomplete-Data Perspectives*, ed.s Meng, X. and Gelman, A., Wiley.

Books

1. Reilly C, (2009), *Statistics in Human Genetics and Molecular Biology*, Chapman & Hall/CRC Press.

Presentations, Posters and Abstracts

1. Reilly, C. and Gelman, A. "Post-stratification without population level information: with application to political polling," Case Studies in Bayesian Statistics Workshop 5, Pittsburgh PA, September 24-25, 1999.
2. Schacker, T., Ngyuen, P., Gatell, J., Reilly, C., Martinez, E., Horban, A., Bakawska, E., Leeuwen, R., Wolinsky, S., Haase, A., Murphy, R. "Persistent depletion of CD4+ T cells in lymphoid tissues among patients randomized to mono-class vs. dual-class regimens in the Atlantic study", The 1st IAS conference on HIV pathogenesis and treatment, Buenos Aires, Argentina, July 8–11, 2001.
3. Reilly, C. "A method for normalizing microarrays using the transcripts that are not differentially expressed," Cape Cod Workshop on Monte Carlo Methods, Hyannis, MA, September 13-15, 2002.
4. Schacker, T., Nguyen, P. Beilman, G., Larson, M., Reilly, C., Wolinsky, S., and Haase, A. "The impact on immune reconstitution of fibrosis in the T cell zone niche of secondary lymphatic tissues during HIV-1 infection," presented by T. Schacker at IDSA, Chicago, October 24–26, 2002.
5. Sandgrathe, S., Reilly, C. "Comparing weather prediction models", Northwest Weather Workshop Seattle on 6,7 March, 2003.
6. Raghavan, A., Ogilvie, R., Reilly, C., Abelson, M., Robison, R., Raghavan, S., Vasdewani, J., Krathwohl, M., Bohjanen, P. "Global analysis of mRNA decay in T cells", presented by P. Bohjanen, Vienna RNA Society, June 2003.
7. Reilly, C. "Correlation in oligonucleotide space: using the correlation to conduct more accurate inference" Joint Statistical Meetings, San Francisco, CA, August 9, 2003.

8. Reilly, C. "Correlation in oligonucleotide space: using the correlation to conduct more accurate inference" Biostatistics Department Seminar, Birmingham, AL, February 10, 2004.
9. Reilly, C. "A completely non-parametric approach to the analysis of longitudinal microarray experiments", International Conference on the Analysis of Genomic Data, Boston, MA, May 11, 2004.
10. Skinner, P., Abbassi, H., Cheseboro, B., Race, R., Reilly, C., Haase, A. "Gene expression alterations in brains of scrapie infected mice", presented by Pam Skinner, June 2004.
11. Reilly, C. "A new approach to measuring goodness of fit for spatial and temporal data", International Chinese Statistical Association, San Diego, CA, June 7, 2004.
12. Blumenthal, M., Miller, M., Reilly, C., Oetting, W., Willaert, B., Luah, S-S., Brott, M., King, R. "Analysis of ADORA3 as a possible candidate gene for Asthma", Annual Meeting of the American Academy of Allergy, Asthma and Immunology, presented by M. Blumenthal, August 2004.
13. Blumenthal, M., Reilly, C., Miller, M., Willaert, B., Luah, S-S., Oetting, W., King, R. "Identification of asthma susceptibility genes using cluster analysis", Annual Meeting of the American Academy of Allergy, Asthma and Immunology, presented by M. Blumenthal, August 2004.
14. Reilly, C. "A completely non-parametric approach to the analysis of longitudinal microarray experiments", Joint Statistical Meetings, Toronto, ON, August 11, 2004.
15. Reilly, C., Blumenthal, M., King, R., Oetting, W., Miller, M., "Asthma Phenotypes: a unique cluster of physiologic variables", Annual Meeting of the American Academy of Allergy, Asthma and Immunology, presented by M. Blumenthal, Oct. 2004.
16. Reilly, C. "Normalization of microarrays in non-standard settings" (2005), Conference for the International Society for Bayesian Analysis, Bormio, Italy, January 11, 2005.
17. Reilly, C. "Bayesian calibration of the mass/charge axis in MALDI-TOF mass spectrometry" (2005), Joint Statistical Meetings, Minneapolis, MN, August 8, 2005.
18. Fan, D., Bitterman, P., Reilly, C., "Translational Efficiency is Linked to Specific mRNA Elements During Apoptotic Rescue by Enforced Activation of the Protein Synthesis Machinery", International Conference on Intelligent Systems for Molecular Biology, presented by D. Fan, 2005.
19. Skinner, P., Abbassi, H., Cheseboro, B., Race, R., Reilly, C., Haase, A., "Gene expression alterations in brains of scrapie infected mice", Pathobiology, presented by P. Skinner, 2005.
20. Nordgaard, C.L., Berg, K. M., Kapphahn, B. J., Reilly, C., Feng, X., Olsen, D. A., Ferrington, D. A., "Altered retinal pigment epithelium protein expression associated with the progression of age-related macular degeneration", The Association for Research in Vision and Ophthalmology, presented by C.L. Nordgaard, 2005.
21. Ethen, C.M., Basak, N., Feng, X., Olsen, T.W., Reilly, C., Ferrington, D.A., "Proteomic analysis of retinal protein expression with the progression of AMD", The Association for Research in Vision and Ophthalmology, presented by C.M. Ethen, 2005.
22. Krason, D., Reilly, C., Leduc, R., Neaton, J., Abrams, D., Schacker, T., "Incomplete Immune reconstitution in HIV-1 infection after 2 years of highly active anti-retroviral therapy", The Infectious Disease Society of America, presented by D. Krason, 2005.

23. Reilly, C. "Bayesian calibration of the mass/charge axis in MALDI-TOF mass spectrometry" (2005), Eastern North American Biometric Society Meeting, Tampa, FL, March 28, 2006.
24. Reilly, C. "A new method for detecting linkage signals from pedigrees in the presence of allelic heterogeneity" (2007), Joint Statistical Meetings, Salt Lake City, UT, August 8, 2007.
25. Zheng Y, Reilly C "Bayesian variogram modeling in a metric space" (2007), Joint Statistical Meetings, Salt Lake City, UT, August 8, 2007.
26. Li M, Reilly C, Carlin B "Bayesian multivariate spatial models for association mapping in structured samples" (2007), Joint Statistical Meetings, Salt Lake City, UT, August 8, 2007.
27. Baker J, Cavert W, Krason D, Reilly C, Henry K, Abrams D, MacArthur R, Peng G, Neaton J, Rapkin J "Poor Initial CD4+ Recovery with Anti-retroviral Therapy Prolongs Immune Depletion and Increases Risk for AIDS and Non-AIDS Diseases: Results from the CPCRA FIRST study" (2007), CROI.
28. Li Q, Duan L, Ma Z, Reilly C, Miller C, Haase AT "The critical role CD4+ T cells may play in intra-vaginal transmission of SIV" (2007), 25th Annual Symposium on Nonhuman Primate Models for AIDS.
29. Barthold B, Khoruts A, Reilly C, Haase A, Estes J, Schacker T "Collagen deposition limits immune reconstitution in the gut" (2007), CROI.
30. Reilly, C. "A spatio-temporal model of viral production by an infected cell" (2008), Joint Statistical Meetings, Denver, CO, August 5, 2008.
31. Karunadharma PP, Nordgaard CL, Reilly C, Feng X, Olsen TW, Ferrington DA "Age-related changes in protein content of the human retinal pigment epithelium" (2008), ARVO.
32. Baker J, Barthold B, Khoruts A, Estes J, Reilly C, Schacker T "Collagen deposition limits immune reconstitution in the gut" (2008), Conference on Retroviruses and Opportunistic Infections.
33. Higgs L, Yang L, Anderson LB, McGowan, TF, Reilly C, Witthuhn BA, Gourley, GR "How reproducible is iTRAQ Triplicate LC-MS/MS analysis of normal colon tissue tryptic peptides labeled with iTRAQ 4-plex reagents" (2008), American Society for Mass Spectrometry.
34. Smith AJ, Li Q, Wietgreffe SW, Schacker TW, Reilly CS, Haase AT "The relationship between virus replication and gene expression in lymphatic tissue during HIV-1 infection", 2010, International HIV & Hepatitis Drug Resistance Workshop & Curative Strategies Conference.
35. Reilly C "An introductory overview of the current state of statistical genetics" (2011), JSM.
36. Skinner P, Kim H, Kinzel N, Reilly C, Olson K. "Treatment of prion disease with heterologous recombinant prion proteins", 2011, Prion 2011, Montreal, Canada.
37. Zeng M, Southern PJ, Reilly CS, Schacker TW, Haase AT. "Lymphoid tissue damage in HIV-1 infection depletes naive T cells and limits naive T cell reconstitution after antiretroviral therapy", 2011, Institute for Molecular Virology Symposium, Minneapolis, MN.
38. Mauzy MJ, Lancto CA, Enomoto S, Abrohamson MS, Reilly C, Rutherford MS. "Comparative cryptosporidium transcriptomics reveals disparate patterns of *C. parvum* and *C. hominis* gene expression during in vitro culture", 2012, International Giardia and Cryptosporidium Conference, Wellington, New Zealand.

39. Li J, Li Y, Chen R, Carrera C, Reilly C, Fok A, Rudney J, Jones R, Aparicio C. "Surface degradation of dental resin composites induced by microcosm biofilms grown in a bioreactor directly from pediatric donor's plaque", 2012, World Biomaterials Congress, Chengdu, China.
40. Sanchez J, Rothenberger M, Reilly C, Russ S, Deeks S, Schacker T, "Persistent Abnormalities of Lymphoid Structures in HIV Viremic Controllers", Conference on Retroviruses and Opportunistic Infections, Atlanta, GA, 2013.
41. Rothenberger M, Stevenson M, Fletcher C, Beilman G, Chipman J, Khoruts A, Reilly C, Wietgreffe S, Haase AT, Shacker T. "Multifocal detection of HIV-1 RNA in lymphatic tissues during early viral recrudescence after treatment interruption". Conference on Retroviruses and Opportunistic Infections, Atlanta, GA, 2013.
42. Laguna TA, Williams CB, Brandy K, Welchin CW, Moen CE, Reilly CS, Wendy CH. "Sputum CC10 concentration as a potential biomarker of cystic fibrosis lung disease". The American Thoracic Society, Philadelphia, PA, 2013.
43. Laguna TA, Williams CB, Sauer A, Brandy K, Welchin CW, Moen CE, Reilly CS, Wendt CH. "Urinary desmosine and cathepsin B concentrations in healthy controls without cystic fibrosis". The American Thoracic Society, Philadelphia, PA, 2013.
44. Gulcev D, Reilly C, Nelsestuen G, Wendt C. "Plasma metabolites associated with acute exacerbations of chronic obstructive pulmonary disease". American Society for Mass Spectrometry Conference, Minneapolis, MN, 2013.
45. Pragman A, Kim H, Reilly C, Wendt C, Isaacson RE. "The lung microbiome in moderate and severe chronic obstructive pulmonary disease". The Aspen Lung Conference, Aspen, CO, 2013.
46. Reilly C "Deconvolving taxonomic contributions to group differences in microbiomic investigations". International Conference on Integrative Biology, Las Vegas, NV, 2013.
47. Jones RS, Rasmussen K, Reilly C "Examining anti-biofilm therapies to control pathogenic oral bacteria in young children", CTSI scholar poster session, University of Minnesota, MN, 2014.
48. Shang K, Reilly C "Nonparametric Bayesian analysis of the 2 sample problem with censoring", Bayesian Young Investigators Meeting, Vienna, Austria, 2014.
49. Reilly C. "The use of microbiomics in clinical investigations: overview and some recent contributions". Division of Epidemiology and Community Health, University of Minnesota, MN, 2015.
50. Reilly C "Deconvolving taxonomic contributions to group differences in microbiomic investigations with application to COPD". Biostatistics Branch, NIAID, 2016.

Current Research Grant Support

1. PREVAIL IV: a Double Blind, Placebo Controlled Randomized Trial to Assess Antiviral Activity of GS-5734 in Male Ebola Survivors (PI of subcontract: Cavan Reilly)
12% salary support for Dr. Reilly (July 2016–July 2017)
2. Summer Institute for Training in Biostatistics (PI: Cavan Reilly)
10% salary support for Dr. Reilly (March 2016–February 2019)

3. PREVAIL VI: a Genome Wide Association Study of Host Factors Involved in Development or Protection from Ebola Virus Disease (PI of subcontract: Cavan Reilly)
3% salary support for Dr. Reilly (July 2016-July 2017)
4. Antifibrotic Therapy to Improve Immune Reconstitution in HIV Patients (PI: Timothy Schacker)
9% salary support for Dr. Reilly (December 2010–February 2017)
5. Regulation and Integration of Hepatic Function with Mammary and Adipose Metabolism in Multiparous Holstein Cows during the Periparturient Period (PI: Brian Crooker)
8% salary support for Dr. Reilly (December 2013–December 2017).
6. Clinical Research Management Operations Center for Ebola (PI: James Neaton)
33% salary support for Dr. Reilly (November 2015–March 2017)
7. Reversing Tissue Fibrosis in HIV Patients (PI: Timothy Schacker)
9% salary support for Dr. Reilly (February 2013–January 2018)
8. Interplay Between Lipophagy and Mitophagy in Skeletal Muscle Aging (PI: Edgar Arriaga)
6% salary support for Dr. Reilly (February 2016–January 2021)
9. The Lymphoid Tissue Pharmacology of Antiretroviral Drugs (PI: Courtney Fletcher)
0% salary support for Dr. Reilly (providing oversight of Lin Zhang on a grant he helped write but on which he can't participate due to time constraints) (February 2016–January 2021)
10. Age-related Macular Degeneration, Mitochondria and the CFH Genotype (PI: Deborah Ferrington)
3% salary support for Dr. Reilly (providing oversight of an RA on a grant he helped write but on which he can't fully participate due to time constraints) (February 2016–January 2021)
11. Calprotectin in Oral Innate Immunity (PI: Mark Herzberg)
1% salary support for Dr. Reilly (providing oversight on a grant he helped write but on which he can't fully participate due to time constraints) (February 2016–January 2021)
12. Reservoir Dynamics in Patients Initiating HIV Antiretroviral Treatment (PI: Timothy Schacker)
0% salary support for Dr. Reilly (providing oversight on a grant he helped write but on which he can't fully participate due to time constraints) (February 2016–January 2021)

Past Research Grant Support

1. NIH salary support from the Great Lakes Center for AIDS Research (PIs: Drs. Ashley Haase and Steve Wolinsky: Northwestern University), 50% effort, co-PI, August 2000–December 2002, 26.5% January 2003–August 2003.
2. RA salary and computing support from a University of Minnesota Grant-in-Aid of Research, Artistry, and Scholarship (PI: Cavan Reilly), Filtering for non-Gaussian observations of non-linear systems of stochastic differential equations, August 2001–August 2002.
3. CFAR Development funds, from the NIH, 74.5% effort, (PI: Cavan Reilly), June 2003–August 2003.
4. NIH salary support from the Genetics of Asthma Project (PI: Malcolm Blumenthal), 15% effort, co-PI, August 2003–May 2007.

5. NIH salary support from the Lymphoid Architecture Project (PI: Timothy Schacker), 10% effort, co-PI, August 2003–December 2007.
6. Statistical Methods in Cancer Control Epidemiology, (PI: Brad Carlin), 10% effort, co-PI, August 2003–July 2007.
7. NIH salary support from the Pathogenesis of HIV-Induced Immunity grant (PI: Ashley Haase), 10% effort, co-PI, April 2004–February 2009.
8. NIH salary support from the Genomic analysis of HIV-1 grant (PI: Ashley Haase), 10% effort, co-PI, Dec. 15, 2003–November 2008.
9. NIH salary support from the Antifibrotic Drug Discovery in Lung Disease grant (PI: Peter Bitterman), 5% effort, co-PI, April 1, 2004–February 2008.
10. NIH salary support from the Regulation of T lymphocyte mRNA grant (PI: Paul Bohjanen), 10% effort, co-PI, September 2002–May 2007.
11. Minnesota partnership funds from the Non-exercise induced thermogenesis grant (PI: Kathy Kotz), 10% effort, co-PI, July 2003–June 2005.
12. Topical Microbicide Against SIV and Chlamydia (PI: Dr. Ashley Haase), 5% effort, co-PI, September 2008–September 2010.
13. Protein Biomarkers in Lung Allograft Function (PI: Dr. Chris Wendt), 10% effort, co-PI, September 2008–September 2013.
14. Bronchoalveolar Lavage Cell Biomarkers of Lung Rejection (PI: Dr. Marshall Hertz), 10% effort, co-PI, September 2008–September 2010.
15. CTSI Education Pilot (PI: Dr. Terri Laguna), 5% effort, co-PI, January 2013–December 2014.
16. CTSI Education Pilot (PI: Dr. Robert Jones), 5% effort, co-PI, January 2013–December 2014.
17. A Compartmental Analysis of HIV Reservoirs and Immune Reconstitution (Program Director: Dr. Timothy Schacker PI of Biostatistics Core: Dr. Reilly), 38% effort, September 2008–August 2014.
18. Antifibrotic Therapy to Improve Lymph Node Architecture in SIV (PI: Dr. Timothy Schacker), 3.4% effort, co-PI, September 2010–August 2015.
19. Microarray Studies to Discover the Mechanisms of the delta-Nef SIV vaccine (PI: Dr. Ashley Haase), 10% effort, September 2010–August 2015.
20. Decay Kinetics of SIV with the compound Raltegravir (PI: Dr. Ashley Haase), 2.5% effort, co-PI, September 2011–August 2013.
21. Interactions Between Oral Biofilms (PI: Joel Rudney), 10% effort, co-PI, September 2011–August 2016.
22. Urinary Biomarkers in Biopsy Defined Early Nephropathy in Types 1 and 2 Diabetes (PI: Dr. Mark Mauer), 10% effort, co-PI, September 2009–October 2015.

Teaching

Courses I have taught (at the University of Minnesota unless otherwise noted) include:

1. Introduction to Statistics (Columbia University, 1998–2000)

2. Biostatistics (2001–2002)
3. Statistics for Human Genetics and Molecular Biology (2003–2016)
4. Modern Nonparametrics (2003)
5. Bayesian Data Analysis and Decision Theory (2005–2011)
6. Advanced Statistics for Human Genetics (2014–2016)
7. Advanced Inference (2015)

In addition I have been the thesis advisor for 11 MS theses and 5 PhD dissertations. I have been the project advisor for 1 completed MPH. I have served on the PhD examining committee of 25 students (9 in Biostatistics, 4 in Statistics, 3 in Computer Science with the remainder being for students in various health science areas, such as Microbiology, Animal Science and Pharmacy).

I have also been actively involved with mentoring programs in the School of Medicine and the School of Public Health: I have been a mentor for 3 assistant professors on awarded training grants and I consult for an assistant professor on her awarded training grant.

PhD Advising

1. Yan Zhang, “Topics in Low Level Analysis of Microarrays”, September, 2006.
2. Xiaoyan Li, “Statistical Skeleton Estimation”, April, 2007.
3. Meijuan Li, “Statistical Methods for Genetics and Genomics Studies”, December, 2008.
4. Xiaoxiao Kong, “Statistical Methods in Genome Sequence Analysis”, September, 2011.
5. Kan Shang, “Bayesian methods for high dimensional longitudinal data analysis”, December, 2016.

Service

I serve as one of the cochairs of the new Data Science MS program at the University of Minnesota.

I have served on the following study sections:

1. NIH Special Emphasis Panel: HIV Clinical Trial Planning Grant Program
2. NIH Special Emphasis Panel: Sustained Release for Antiretroviral Treatment or Prevention of HIV Infection
3. HIV Special Emphasis Panel: Centers for AIDS Research
4. NIESH/NIH Special Emphasis Panel: Centers for Oceans and Public Health
5. NIH Clinical and Integrative Cardiovascular Sciences: ad hoc reviewer
6. NIH Clinical Cardiovascular Sciences: ad hoc reviewer
7. NIH Infectious Disease, Reproductive Health, Asthma and Pulmonary Health: ad hoc reviewer

I have also provided written reviews of grants for the NSF and the Natural Sciences and Engineering Research Council of Canada.

I have also reviewed grants for multiple local grant sources sponsored by the AHC and the graduate school.

I have reviewed articles for the following journals: *The Journal of the American Statistical Association*, *Bioinformatics*, *Nature*, *Nucleic Acids Research*, *Statistics in Medicine*, *PLoS Computational Biology*, *PLoS Genetics*, *Molecular Human Genetics* and *Genetics in Medicine*.

I am a member of the editorial board for the BMC journals in the capacity as a statistical reviewer.

I am also a member of the editorial board of a new journal called “Statistical Communications in Infectious Diseases”.