CURRICULUM VITAE

Yang Yang

I. Personal Information

Department of Biostatistics
College of Public Health and Health Professions
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II. Education

Degrees

2004	Ph.D.	Biostatistics, Emory University, Atlanta, Georgia
2004	M.S.	Biostatistics, Emory University, Atlanta, Georgia
1998	B.S.	Applied Mathematics, South China University of Technology, China

Other Education

1999 — 2000	Master program in Applied Statistics, Worcester Polytechnic Institute, Worcester, Massachusetts
1998 — 1999	Master program in Applied Statistics, South China Univ. of Tech., China

III. Research and/or Professional Experience

Assistant Professor, November 2011 —

Department of Biostatistics, University of Florida

Continue as a Co-investigator on the two NIH-funded grants, R01-AI32042 and U01-GM070749 and my research on statistical methods for modeling infectious diseases and control measures. Recent projects include a Bayesian framework for estimating influenza vaccine efficacy in the presence of missing lab-test results and selection bias for lab-testing; Simultaneous modeling of longitudinal immunological responses and transmission of HIV within discordant partner pairs; Spatial modeling of multiple enteroviruses responsible for the hand, foot, and mouth disease epidemics in China.

Affiliated Assistant Member, November 2011 —

Assistant Member, November 2010 — October 2011

Staff Scientist, July 2006 — October 2010

Fred Hutchinson Cancer Research Center

Co-investigator on two NIH-funded grants, R01-AI32042 (Methods for Evaluating Vaccine Efficacy) and U01-GM070749 (Containing Bioterrorist and Emerging Infectious Diseases), Investigating statistical methods for modeling transmission and control of infectious diseases such as influenza, smallpox and HIV, and evaluating efficacies of interventions such as vaccine and antiviral agents.

PI of subcontract award R01-AI51164 (Methods for Long-Term Follow-Up of HIV-Infected Patients). Nonparametric hypothesis-testing methods for single or multiple comparisons and their application to HIV genetic data.

Senior statistician on the analysis of the surveillance data of the hand, foot and mouth disease (HFMD) in China and on the design of epidemiological studies risk factors associated with disease severity and spreading of the HFMD.

Research Associate, September 2004 — June 2006

Center for Biostatistics in AIDS Research (CBAR), Harvard University.

Senior statistician in the Statistical and Data Analysis Center of the Adult AIDS Clinical Trial Groups. Providing statistical support for AIDS clinical trials including protocol development, data and safety monitoring, analysis plan development and data analysis. Recent major projects with full or partial involvement:

- A5224S: Long-Term Metabolic Assessment in Subjects Treated with Tenofovir/Emtricitabine or Abacavir/Lamivudine along with either Efavirenz or Atazanavir with Ritonavir.
- A5082: A Randomized, Double-Blinded, Placebo-Controlled Study of Metformin and Rosiglitazone, Along or in Combination, in HIV-Infected Subjects with Hyperinsulinemia and Elevated Waist/Hip Ratio.
- A5095: Phase III, Randomized, Double-Blinded Comparison of Three Protease Inhibitor-Sparing Regimens for the Initial Treatment of HIV Infection.
- A5084: Evaluation of Metabolic Complications Associated with Antiretroviral Medications in HIV-Infected Pregnant women.

Research Assistant, September 2001 — August 2004

Department of Biostatistics, Emory University.

Supervisor: Dr. Ira Longini and Dr. Elizabeth Halloran.

Investigating stochastic models and simulations for influenza, HIV and smallpox epidemics; estimating per-contact transmission probability of the diseases and the efficacy of influenza antiviral agent and HIV vaccine; exploring trial design issues.

Research Assistant, May. 2001 — Aug. 2001

Department of Biostatistics, Emory University.

Supervisor: Dr. Amita Manatunga.

Developing frailty models for survival times and realizing PR algorithm; exploring proportional hazard models and proportional odds models for grouped survival times.

Research Assistant, Jun. 2000 — Aug. 2000

Department of Biostatistics, Emory University

Supervisor: Azhar Nizam (Senior Associate)

Involved in the project "Epidemiology & Ecology of Vibrio Cholera in Bangladesh"; modeling cholera count data.

IV. Teaching Experience

Lecturer, Jan. 2012 — April 2012

Department of Biostatistics, University of Florida

Large sample theory, a required course for PhD program.

Teaching Assistant, Sep. 2001 — May 2002

Department of Biostatistics, Emory University

Tutoring biostatistics and SAS programming for graduate students in the School of Public Health.

Teaching Assistant, Sep. 1999 — May 2000

Department of Mathematical Sciences, Worcester Polytechnic Institute

Tutoring calculus and SAS programming for undergraduate students.

Teaching Assistant, Sep. 1998 — Jun. 1999

Department of Applied Mathematics, South China University of Technology

Tutoring linear algebra and calculus for undergraduate students.

V. Consulting Projects

Department of Biostatistics, Emory University, Apr. 2004 — Aug. 2004

- Effect of Off Pump Coronary Artery Bypass (OPCAB) in reducing morbidity and mortality.

VI. Publication

1. Halloran, ME, Longini, IM, Nizam, A and Yang, Y. Containing Bioterrorist Smallpox. *Science*, 2002; 298: 1428-1432.
2. Longini, IM, Halloran, ME, Nizam, A and Yang, Y. Containing Pandemic Influenza with Antiviral Agents. *American Journal of Epidemiology*, 2004; 159: 623-633.
3. Fu, HZ, Yang, Y and Yao, YX. A Mathematical Model in Ranking Tax Credibility of Entities. *Mathematics in Practice and Theory* (China). 2004; 34: 11-15.
4. Yang, Y, Longini, IM and Halloran, ME. Design and Evaluation of Prophylactic Intervention Using Infectious Disease Incidence Data from Close Contact Groups.

Applied Statistics. 2006; 55: 317-330.

5. Longini, IM, Halloran, ME, Nizam, A, Yang, Y, Xu, S, Burke, DS, Cummings, DAT and Epstein, J. Containing a large bioterrorist smallpox attack: A computer simulation approach. *International Journal of Infectious Disease*. 2007; 11: 98-108.

6. Halloran, ME, Hayden, F, Yang, Y, Logini, IM and Monto, A. Antiviral Effects on Influenza Viral Transmission and Pathogenicity: Observations from Household-Based Trials. *American Journal of Epidemiology*. 2007; 165: 212-221.

7. Mulligan, K, Yang, Y, Wininger, D, Koletar, S, Parker, RA, Alston-Smith, B, Basar, M and Grinspoon, S. Effects of Metformin and Rosiglitazone in HIV-Infected Patients with Hyperinsulinemia and Elevated Waist/Hip Ratio. *AIDS*. 2007; 21: 47-57.

8. Shikuma, CM, Yang, Y, Meyer, WA, Glesby, M, Tashima, KT, Ribaudo, H, Webb, N, Bastow, B, Kuritzkes, DR, and Gulick, RM. Metabolic Effects of Protease Inhibitor-Sparing Antiretroviral Regimens given as Initial Treatment of HIV-1 Infection (AIDS Clinical Trials Group Study – A5095). *Journal of AIDS*. 2007; 44:540-550.

9. Yang, Y., Longini, I.M. and Halloran, M.E.: A Resampling-Based Test to Detect Person-To-Person Transmission of Infectious Diseases. *Annals of Applied Statistics*. 2007, Vol. 1:211-228. (PMC2680309)

10. Yang, Y., Longini, I.M. and Halloran, M.E.: A Data-Augmentation Method for Infectious Disease Incidence Data from Close Contact Groups. *Computational Statistics and Data Analysis*. 2007, Vol. 51:6582-6595.

11. Yang, Y, Halloran, ME, Sugimoto, J and Longini IM. Detecting Human-To-Human Transmission of Avian A(H5,N1) Influenza. *Emerging Infectious Disease*. 2007; 13:1348-1353.

12. Livingston, E.G., Cohn, S.E., Yang, Y., Watts, D.H., Bardeguez, A.D., Jones, T.B., Smith, L.M., Umbleja, T. and McComsey, G.A.: Lipids & Lactate in HIV-1 Infected Pregnancies With/ Without Protease Inhibitor-Based Therapy. *Obstetrics and Gynecology*. 2007, Vol. 110:391-397.

13. Yang, Y and DeGruttola, V. Resampling-based Multiple Testing Methods with Covariate Adjustment: Application to Investigation of Antiretroviral Drug Susceptibility. *Biometrics*. 2008; 64:329-336.

14. Yang, Y, Gilbert, P, Longini, IM and Halloran, ME. A Bayesian Framework for Estimating Vaccine Efficacy per Infectious Contact. *Annals of Applied Statistics.* 2008; 2:1409-1431. (PMC2630256)

15. Yang, Y, Halloran, ME and Longini, IM. A Bayesian Model for Evaluating Influenza Antiviral Efficacy in Household Studies with Asymptomatic Infections. *Biostatistics*. 2009; 10: 390-403. (PMC2733175, PMID:19202152)

16. Yang ,Y, Sugimoto, JD, Halloran, ME, Basta, NE, Chao, DL, Matrajt, L, Potter, G, Kenah, E and Longini, IM. The Transmissibility and Control of Pandemic Influenza A (H1N1) Virus. *Science*. 2009; 326: 729-733.

17. Yang, Y, Halloran, ME, Daniels M and Longini, IM. Modeling Competing Infectious Pathogens from a Bayesian Perspective: Application to Influenza Studies with Incomplete Laboratory Results. *Journal of the American Statistical Association*. 2010; 105:1310-1322.

18. Sugimoto, JD, Borse, NN, Ta, ML, Stockman, LJ, Fischer, GE, Yang, Y, Halloran, ME, Duchin, JS and Longini, IM. The effect of age on transmission of clinical pandemic influenza A (H1N1) during an outbreak in a camp and households in Washington State, United

States. *Epidemiology*. 2011; 22(2): 180-187.

19. Wang, Y, Feng Z, Yang, Y, Self, SG, Gao, Y, Wakefield, J, Wang, L, Zhang, J, Chen, X, Yao, L, Stanaway, J, Wang, Z, Yang, W. Hand, Foot and Mouth Disease in China: Patterns of Spread during 2008-2009. *Epidemiology*. 2011; 22: 781-792 (corresponding author).

20. Yang, Y, Longini, IM, Halloran, ME and Obenchain, V. A hybrid EM and Monte Carlo EM Algorithm and Its Application to Analysis of Transmission of Infectious Diseases. *Biometrics*. 2012. Accepted.

VII. Papers Submitted or in Preparation

1. Yang Y and DeGruttola, V. Resampling-based Methods for Testing Equality of Covariance/Correlation Matrices. Submitted.

2. Sugimoto, J, Yang, Y, Longini, IM and Halloran, ME. Unmeasured Heterogeneity in Susceptibility When Estimating the Effects of Potential Determinants of Household Transmission of Symptomatic Pandemic Influenza A (H1N1) in Los Angeles, Spring 2009. Submitted.

VIII. Conference Abstracts

1. Yang Y. and Longini I.M.: New methods for the estimation of influenza antiviral agent efficacy. *Joint Statistical Meeting*, San Francisco, CA, 2003.

2. Yang Y. and Longini I.M.: Estimation of influenza antiviral agent efficacy. *International Biometric Society/Eastern North American Region Spring Meeting*, Tampa, FL, 2003.

3. Mulligan, K., Yang, Y., Wininger, D., Koletar, S., Parker, R.A., Alston-Smith, B., Basar, M. and Grinspoon, S.: Effects of Metformin and Rosiglitazone on Body Composition in HIV-Infected Patients with Hyperinsulinemia and Elevated Waist/Hip Ratio: A Randomized, Placebo Controlled Trial. *Conference on Retroviruses and Opportunistic Infections*, Denver, CO, 2006.

4. Shikuma, C.M., Yang, Y., Meyer, W.A., Glesby, M., Tashima, K.T., Ribaudo, H., Webb, N., Bastow, B., Kuritzkes, D.R., and Gulick, R.M.: Metabolic Analyses within A5095: Effect of Efavirenz against an All-Nucleoside/Nucleotide Background. *Conference on Retroviruses and Opportunistic Infections*, Denver, CO, 2006.

5. Yang, Y. and DeGruttola, V.: Resampling-based Multiple Testing Methods with Covariate Adjustment: Application to Investigation of Antiretroviral Drug Susceptibility. *Workshop on Quantitative Methods for Research on Antiviral Resistance*, Boston, MA, 2006

6. Yang, Y., Gilbert, P., Longini, I.M. and Halloran, M.E.: A Bayesian Framework for Estimating Vaccine Efficacy per Infectious (invited talk) Contact. *Disease Dynamics 2008*, University of British Columbia, Vancouver, British Columbia, 2008

7. Yang, Y., Halloran, M.E., Daniels, M. and Longini, I.M.: Modeling Competing Infectious Pathogens from a Bayesian Perspective: with Application to Influenza Studies with Incomplete Laboratory Results. *MFO workshop: Design and analysis of Infectious Disease Studies*, Mathematisches Forschungsinstitut Oberwolfach, Germany, 2009

8. Yang, Y., Halloran, M.E., Daniels, M. and Longini, I.M.: A Partial Monte carlo EM Algorithm for Analyzing Transmission of Infectious Diseases. *MIDAS Network Meeting*, Atlanta, GA, 2011

IX. Review Experience

- Academic editor for PLoS ONE
- Biometrics, biostatistics, AOAS
- American Journal of Epidemiology, Epidemics, PLoS Medicine
- Vaccine

X. Research Interest

- Statistical models for infectious diseases: recursive models, likelihood methods, Bayesian method, and generalized linear models
- Multiple testing theory
- Causal inference
- Missing data
- Stochastic process
- Statistical computations such as Gibbs sampler, EM algorithm, permutation and bootstrap

XII. Professional Membership

- American Statistical Association.
- Institute of Mathematical Statistics.

XIII. Awards and Honors

2000 — 2004	Graduate fellowship, Emory University
1999 — 2000	Graduate fellowship, Worcester Polytechnic Institute
1997	Excellent college student with outstanding scholarship
1997	Outstanding college student in Guangdong Province, China
1997	P&G Scholarship
1997	Honorable mention in the international Mathematical Contest in Modeling (MCM)
1996	Excellent college student with first-place scholarship
1995	Excellent college student with second-place scholarship