

CURRICULUM VITAE

Kevin Dobbin

ADDRESS

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EDUCATION

2001 Ph.D. University of Minnesota at Twin Cities, Minnesota, in Statistics
1996 B.A. University of Colorado at Boulder, Colorado, in Mathematics
1987 B.A. St. John's College, Santa Fe, New Mexico, Great Books Program

PROFESSIONAL EXPERIENCE

2009- Assistant Professor of Biostatistics, College of Public Health, University of Georgia, Athens
2002-2008 Mathematical Statistician, National Cancer Institute, National Institutes of Health
2001-2002 Postdoctoral Fellow, National Cancer Institute, National Institutes of Health
1999-2001 Research Assistant, Minnesota Epilepsy Group, P.A., St. Paul
1998-2001 Lecturer, Department of Statistics, University of Minnesota, Twin Cities
1996-1998 Teaching Assistant and Research Assistant, University of Minnesota, Twin Cities

HONORS AND AWARDS

2007 Performance Award, National Institutes of Health
2003 Performance Award, National Institutes of Health
2001-2002 Cancer Research Training Award, National Institutes of Health
2000 Student Paper Award, International Biometric Society, Eastern North American Region
1999-2001 Scholarship, College of Liberal Arts, University of Minnesota
1995-1996 J. Tour Scholarship in Mathematics, College of Arts and Sciences, University of Colorado

PROFESSIONAL ACTIVITIES

Memberships

American Statistical Association

The International Biometric Society, Eastern North American Region (ENAR)

Consulting, review and advisory

Cooperative prostate cancer tissue resource (2002-6)

Colon Cancer Working Group of the Program for the Assessment of Clinical Cancer Tests (PACCT) (2004-8)

Biomarkers Task Force of the Investigational Drug Steering Committee for the Clinical Trials Evaluation Program (2006-8)

Ad hoc transition committees for R21/R33 grants in the Cancer Diagnosis Program (2002-8)

Clinical Trials Evaluation Program Concept Review Committees (correlative studies, 2002-8)

Clinical Trials Evaluation Program Protocol Review Committees (correlative studies, 2002-8)

Lung Cancer Intergroup correlative study review committee (2007-8)

Colon Cancer Intergroup correlative study review committee (2007-8)

Childhood Cancer Therapeutically Applicable Research to Generate Effective Treatments (TARGET), Childhood Acute Lymphocytic Leukemia Pilot Project (2006-8)

Scientific Committee for the 2008 ASCO-NCI-EORTC Annual Meeting on Molecular Markers in Cancer (2008)

Statistical consultant, TMA design, National Cancer Institute Tissue Arrays Research Project (TARP)

Journal Referee

Journal of the National Cancer Institute

Clinical Cancer Research

Journal of the American Statistical Association

Bioinformatics

Biostatistics

Statistics in Medicine

Journal of the Royal Statistical Society, Series C, Applied Statistics

Physiological Genomics

Journal of Statistical Planning and Inference

Statistical Applications in Genetics and Molecular Biology

Genomics

Biotechniques

Pharmacogenomics

Gastroenterology

Cancer Informatics

Gynecologic Oncology
Journal of Biotechnology
Biomed Central (BMC) Bioinformatics
Biomed Central (BMC) Genomics
Biomed Central (BMC) Cancer
Expert Reviews of Molecular Diagnostics
Biometrical Journal
Functional and Integrative Genomics
Journal of Translational Medicine
Australian Journal of Experimental Agriculture

Grant Reviewer

National Science Foundation
Collaborative Grant Competition of the City University of New York.
Study section, Center for Scientific Review, National Institutes of Health

Postdoctoral Training

- 2004 Genomics: Experimental and Computational Methods: FAES Graduate School, NIH, Bethesda, MD
- 2003 DNA Microarrays: Fabrication and Application: The Foundation for Advanced Education in the Sciences (FAES) Graduate School, National Institutes of Health, Bethesda, MD

COMMUNITY SERVICE

- 2005-2008 Court Appointed Special Advocate (CASA) for Children, CASA Program of Frederick County, Frederick, MD
- 2001-2005 Court Appointed Special Advocate (CASA) for Children, CASA Program of Montgomery County, Rockville, MD
- 1996-1997 Volunteer, Arthritis Foundation, Minneapolis, MN
- 1994-1996 Volunteer, Arthritis Foundation, Denver, CO
- 1994-1995 Volunteer, Boulder Arts Commission, Boulder, CO

PUBLICATIONS

Peer reviewed Journal Articles

- 1 . Dobbin K. K. and Simon R.M. (submitted) How to split a collection of samples into a training set and a validation set when developing a microarray-based classifier.

2. Harvey RC, Wang X, Davidson GS, Ar K, Dobbin KK, Bedrick E, Chen IM, Wilson CS, Wharton W, Atlas SR, Hunger SP, Davidas M, Pullen, J, Carroll AJ, Borowitz, MJ, Bowman WP, Carroll WL, Camitta B, Reaman GH, Bhojwani D, and Willman CL (submitted) Identification of novel subgroups of high-risk pediatric precursor B acute lymphoblastic leukemia by unsupervised microarray analysis: Clinical correlates and therapeutic implications. *Blood*.
3. Dobbin, K.K. (in press) A method for constructing a confidence bound for the actual error rate of a prediction rule in high dimensions. *Biostatistics*.
4. Director's Challenge Consortium for the molecular evaluation of lung adenocarcinoma (2008) Gene expression-based survival prediction in lung adenocarcinoma: a multi-site, blinded validation study. *Nature Medicine*. Advanced online publication digital object identifier: 10.1038/nm.1790.
5. Dobbin, K.K., Zhao, Y. and Simon, R.M. (2008) How large a training set is needed to develop a classifier? *Clinical Cancer Research*, 14: 108-114.
6. Kajdacsy-Balla A, Geynisman JM, Macias V, Setty S, Nanaji NM, Berman JJ, Dobbin K, Melamed J, Kong X, Bosland M, Orenstein J, Bayerl J, Becich MJ, Dhir R, Datta MW and the Cooperative Prostate Cancer Tissue Resource (2007) Practical Aspects of Planning, Building and Interpreting Tissue Microarrays: The Cooperative Prostate Cancer Tissue Resource Experience. *Journal of Molecular Histology*, 38: 113-21.
7. Dobbin, K.K. and Simon, R.M. (2007) Sample size planning for developing classifiers using high dimensional DNA microarray data. *Biostatistics*, 8: 101-117.
8. Dobbin, K.K., Shih, J.H. and Simon, R.M. (2005) Comment on 'Evaluation of the gene-specific dye bias in cDNA microarray experiments'. *Bioinformatics*, 21, 2803-2804.
9. Dobbin, K.K., Kawasaki, E.S., Petersen, D.W., and Simon, R.M. (2005) Characterizing dye bias in microarray experiments. *Bioinformatics*, 21: 2430-2437.
10. Dobbin, K., Beer, D.G., Meyerson, M., Yeatman, T., Gerald, W., Jacobson, J., Conley, B., Buetow, K., Heiskanen, M., Simon, R., Minna, J., Girard, L., Misek, D., Taylor, J., Hanash, S., Naoki, K., Hayes, D. N., Ladd-Acosta, C., Enkemann, S., Viale, A., Giordano, T. (2005) Inter-laboratory comparability study of cancer gene expression analysis using oligonucleotide microarrays. *Clinical Cancer Research*, 11: 565-72.
11. Datta, M.W., Dhir, R., Dobbin, K., Melamed, J., Becich, M.J., Orenstein, J.M., Kajdacsy-Balla, A.A., Bosland, M.C., Patel, A., Macias, V., Berman, J.J., and the Cooperative Prostate Cancer Tissue Resource (2005) Prostate cancer in patients with pre-diagnostic serum PSA values less than 4.0 ng/dl: Results from the Cooperative Prostate Cancer Tissue Resource. *Journal of Urology*, 173: 1546-1551.

12. Dobbin, K. and Simon, R. (2005) Sample Size Determination in Microarray Experiments for Class Comparison and Prognostic Classification. *Biostatistics*, 6: 27-38.
13. Shih, J., Michalowska, A., Dobbin, K., Ye, Y., Qiu, T. and Green, J. (2004) Effects of pooling mRNA in microarray class comparisons. *Bioinformatics*, 18: 3318-3325.
14. Berman, J.J., Datta, M., Kajdacsy-Balla, A., Melamed, J., Orenstein, J., Dobbin, K., Patel, A., and Dhir, R. (2004) The tissue microarray data exchange specification: implementation by the Cooperative Prostate Cancer Tissue Resource. *BMC: Bioinformatics*, 5: 19.
15. Dobbin, K., Shih, J. and Simon, R. (2003) Questions and Answers on Design of Dual-label Microarrays for Identifying Differentially Expressed Genes. *Journal of the National Cancer Institute*, 95: 1362-1369.
16. Simon, R. and Dobbin, K. (2003) Experimental Design of DNA Microarray Experiments. *Biotechniques*, March Supplement: 16-21.
17. Dobbin, K. and Louis, T. (2003) Accommodating Stochastic Departures from Percentile Invariance in Causal Models. *Journal of the Royal Statistical Society, Series B*, 65: 837-849.
18. Dobbin, K., Shih, J., and Simon, R. (2003) Statistical Design of Reverse Dye Microarrays. *Bioinformatics*, 19: 803-810.
19. Simon, R., Radmacher, M., Dobbin, K. and McShane, L. (2003) Pitfalls in the Use of DNA Microarray Data for Diagnostic and Prognostic Classification. *Journal of the National Cancer Institute*, 95: 14-18.
20. Simon, R., Radmacher, M. and Dobbin, K. (2002) Design of Studies Using DNA Microarrays. *Genetic Epidemiology*, 23: 21-36.
21. Dobbin, K. and Simon, R. (2002) Comparison of Microarray Designs for Class Comparison and Class Discovery. *Bioinformatics*, 18: 1438-1445.

Peer reviewed reports

1. Dobbin, K.K. (2006) Experimental design of DNA microarray studies. In: Validation of toxicogenomic technologies: A workshop summary National Research Council of the National Academies of Science. <http://dels.nas.edu/emergingissues/index.shtml>.

Letters

1. Dobbin, K.K. (2007) Letter Re. A five-gene signature and clinical outcome in non-small-cell lung cancer. *New England Journal of Medicine*, 356: 1582.

Book Chapters

1. Dobbin, K. and Simon, R. (2009) Statistical Issues in the Interpretation and Design of Microarray Experiments. In: *Bioinformatics in Cancer and Cancer Therapy*. Humana Press, New York. Book information website: <http://www.springer.com/humana+press/cancer+research/book/978-1-58829-753-2>.
2. Dobbin, K. and Simon, R. (2005) Experimental design [Specialist Review]. In: *Encyclopedia of Genetics, Genomics, Proteomics and Bioinformatics*. John Wiley and Sons, New York. Book website: <http://www.mrw.interscience.wiley.com/ggpb/>

PRESENTATIONS

1. Developing and validating genomic classifiers. Meeting of the International Biometric Society, Eastern North American Region (ENAR), Arlington, VA, March 2008.
2. Statistical issues in biomarker development. Workshop on profiling of immune response to guide cancer diagnosis, prognosis and prediction of therapy, Bethesda, MD, November 2007.
3. How many samples are needed to develop a classifier from microarray data? International Chinese Statistical Association Annual Meeting, Raleigh, NC, June 2007.
4. Statistical similarities and differences: mRNA vs. miRNA profiling studies. Workshop on MicroRNA: Potential for Cancer Detection, Diagnosis, and Prognosis, Rockville, MD, November 2006.
5. Sample size for predictive inference using microarray data. XXIIIrd International Biometric Conference, Montreal, Quebec, Canada, July 2006.
6. Prognostic and predictive factors in cancer. American Joint Committee on Cancer meeting. Washington, DC, April 2006.
7. Developing reproducible genomic classifiers. Strategic Partnering to Evaluate Cancer Signatures (SPECS) investigators' meeting. San Francisco, California, USA, February 2006.
8. Statistical issues with marker validation. Resources for melanoma research workshop. National Cancer Institute and Melanoma Research Foundation. Gaithersburg, Maryland, USA, October 2005.

9. Incorporating Data from Multiple Labs to Develop Prognostic Predictors. Cambridge Healthtech Institute workshop: From gene expression profiling to validated biology. Cambridge, Massachusetts, USA, October 2005.
10. Experimental design issues in expression profiling. National Academy of Sciences, 10th meeting of the Committee on Emerging Issues and Data on Environmental Contaminants, Washington, DC, July 2005.
11. Sample comparability. A joint Food and Drug Administration, Johns Hopkins University, and the Pharmaceutical Researchers and Manufacturers of America Workshop, Rockville, Maryland, USA, July 2005.
12. Interlaboratory comparability study of cancer gene expression analysis using oligonucleotide microarrays. Minisymposium presentation, American Association of Cancer Researchers 96th Annual Meeting, Anaheim, California, USA, April 2005.
13. Sample size determination in microarray experiments for class comparison and prognostic classification. Joint Statistical Meetings, Toronto, Ontario, Canada, August 2004.
14. Design of microarray studies. Infocast's Microarray Data Analysis, Rockville, Maryland, USA, June 2004.
15. Statistical design of microarrays. Microarray Interest Group Meeting, National Institutes of Health, Bethesda, Maryland, USA, August 2003.
16. Designing cDNA microarray experiments for cancer research: issues in class comparison, class discovery, and dye bias. Conference on New Directions in Experimental Design (DAE), Chicago, Illinois, USA, May 2003.
17. Statistical design of reverse dye microarrays, International Biometric Society (ENAR), Tampa, Florida, USA, March 2003.
18. Some issues in microarray experimental design, International Biometric Society (ENAR), Arlington, Virginia, USA, March 2002.
19. Stochastic permutation models for causal inference in clinical trials, Joint Statistical Meetings, Atlanta, Georgia, USA, August 2001.
20. Dose-response curve recovery in placebo-controlled clinical trials. International Biometric Society (ENAR), Chicago, Illinois, USA, March 2000.

PRE-DOCTORAL WORK EXPERIENCE

1994-1996 Temporary, Kelly Temporary Services, Boulder, CO

1991-1994 Copywriter and Promotions Assistant, Butterworth Legal Publishers, Salem, NH

1989-1991 Marketing Assistant, G.K. Hall Division, Macmillan Publishing, Boston, MA

1987-1989 Caretaker for Donald Dobbin, Boston, MA

1988-1989 Receiving Clerk, Lauriat's Bookstore, Boston, MA

1987-1988 Clerk/Third in Charge, Barnes and Noble Bookstore, Boston, MA