

Experience and employment

Harvard School of Public Health - Boston, MA

2003 - : Assistant Professor, Departments of Epidemiology and Biostatistics

University of California at Los Angeles - Los Angeles, CA

2002 – 2003: Postdoctoral Fellow, Department of Biostatistics

University of Southern California - Los Angeles, CA

1998 - 2002: Statistician, Department of Preventive Medicine

1998 - 2001: Chief Consultant, Statistical Consultation and Research Center

1997 - 1998: Research Assistant, Department of Preventive Medicine

1994 - 1996: Teaching Assistant, Department of Mathematics

Education

University of Southern California - Los Angeles, CA - 1994 to 2002

2002: Ph.D. Biostatistics (Duncan Thomas, advisor)

1998: M.S. Biostatistics

1996: M.A. Applied Mathematics

University of Michigan - Ann Arbor, MI - 1988 to 1993

1993: B.A. Mathematics, magna cum laude

1993: B.A. German, magna cum laude

Professional organizations

Member, American Association for Cancer Research

Member, American Society for Human Genetics

Member, American Statistical Association

Member, International Genetic Epidemiology Society

Research interests

Dr. Kraft's research focus is statistical methodology in genetic epidemiology, including family-based and population-based case-control studies. He has published on general family-based analyses for genetic association studies; on analyses that measure association between haplotypes of multiple tightly-linked markers and disease in matched case-control studies; on analyses of "gene \times environment interaction"; and on using joint variation in DNA sequence and gene expression to better understand disease etiology. His collaborative publications include applications to the genetic influences on schizophrenia, cancer, and other complex diseases.

Published articles

- Kraft P, Lange C. "Statistical Methods in Genetic Epidemiology" by Duncan Thomas (book review). *JASA* (in press).
- Kraft P, Hsieh HJ, Cordell HJ, Sinsheimer JS. A conditional-on-exchangeable-parental-genotypes likelihood that remains unbiased at the causal locus under multiple-affected-sibling ascertainment. *Genet Epidemiol* (in press).
- Laird N, Kraft P, Lange C, van Steen K. Testing for association in genetic studies. in: Sliverman et al. *Respiratory Genetics* (in press).
- Kraft P, Cox DG, Paynter RA, Hunter D, De Vivo I. Accounting for haplotype uncertainty in association studies: A comparison of simple and flexible techniques. *Genetic Epidemiology* 28:261-72. 2005 Mar.
- Cox DG, Hankinson SE, Kraft P, Hunter DJ. No association between GPX1 Pro198Leu and breast cancer risk. *Cancer Epidemiology Biomarkers and Prevention*. 13:1821-1822. 2004 Nov.
- Kraft P, Thomas DC. Case-sibling gene-association studies for diseases with variable age at onset. *Statistics in Medicine* 23:3697-3712 2004 Nov.
- Tamimi RM, Hankinson SE, Spiegelman D, Kraft P, Colditz GA, Hunter DJ. Common ataxia telangiectasia mutated haplotypes and risk of breast cancer: a nested case-control study. *Breast Cancer Research*. 2004;6(4):R416-22.
- Kraft P. Multiple comparisons in studies of gene x gene, gene x environment interaction (letter). *American Journal of Human Genetics* 74:582-583 2004 Mar.
- Kraft P, Palmer CGS, Woodward JA, Turunen JA, Minassian S, Paunio T, Lonnqvist J, Peltonen L, Sinsheimer JS. RHD Maternal-Fetal Genotype incompatibility and schizophrenia: extending the MFG Test to include multiple siblings and birth order. *European Journal of Human Genetics* 12:192-198 2004 Mar.
- Kraft P, de Andrade M. GAW13 group six: pleiotropy and multivariate analysis. *Genetic Epidemiology* 25(Suppl1):S50-S56, 2003.
- Kang T, Kraft P, Gauderman J, Thomas DC. Multiple imputation methods for longitudinal blood pressure measurements from the Framingham Heart Study. *BMC Genetics* 4(Suppl1):S43 2003 Dec..
- Kraft P, Bauman L, Yuan J, Horvath S. Multivariate quantitative trait linkage analysis of longitudinal blood pressure measurements. *BMC Genetics* 4(Suppl1):S55 2003 Dec.
- Kraft P, Horvath S. The genetics of gene expression and gene mapping. *Trends in Biotechnology*. 9:377-378, 2003 Sep.
- Allen E, Horvath S, Tong F, Kraft P, Spiteri E, Riggs A, Marahrens Y. Chromosomal context identifies two categories of allelically excluded genes. *Proceedings of the National Academy of Sciences*. 100:9940-9945. 2003 Aug.
- Kraft P, Schadt EE, Aten J, Horvath S. A family-based test for correlation between gene expression and trait values. *American Journal of Human Genetics* 72:1323, 2003 May.
- Kraft P, Wilson M. Family-based association tests incorporating parental genotypes (letter). *American Journal of Human Genetics* 71:1238, 2002 Nov.
- Gauderman WJ, Kraft P. Family-based case control studies. In: Elston RC, Olson J, Palmer L (eds.). *Biostatistical Genetics and Genetic Epidemiology*. New York: John Wiley and Sons. 2002.
- Kraft P. A robust score test for linkage disequilibrium in general pedigrees. *Genetic Epidemiology*. 21(Suppl1):S447-S452, 2001.
- Sherwin RP, Richters V, Kraft P, Richters A. Centriacinar region inflammatory disease in young individuals: a comparative study of Miami and Los Angeles residents. *Virchows Archiv*. 437(4):422-8, 2000 Oct.
- Siegmund KD, Langholz B, Kraft P, Thomas DC. Testing linkage disequilibrium in sibships. *American Journal of Human Genetics*. 67:244-248, 2000 Jul.
- Kraft P, Thomas DC. Bias and efficiency in family-based gene-characterization studies: Conditional, prospective, and retrospective likelihoods. *American Journal of Human Genetics*. 66:1119-1131, 2000 Mar.
- Uckun FM, Nachman JB, Sather HN, Sensel MG, Kraft P, Steinherz PG, Lange B, Hutchinson R, Reaman GH, Gaynon PS, Heerema NA. Poor treatment outcome of Philadelphia chromosome-positive pediatric acute lymphoblastic leukemia despite intensive chemotherapy. *Leukemia & Lymphoma*. 33(1-2):101-6, 1999 Mar.
- Waurzyniak BJ, Heerema N, Sensel MG, Gaynon PS, Kraft P, Sather HN, Chelstrom L, Reaman GH, Uckun FM. Distinct in vivo engraftment and growth patterns of t(1;19)+/E2A-PBX1+ and t(9;22)+/BCR-ABL+ human leukemia cells in SCID mice. *Leukemia & Lymphoma*. 32(1-2):77-87, 1998 Dec.
- Uckun FM, Nachman JB, Sather HN, Sensel MG, Kraft P, Steinherz PG, Lange B, Hutchinson R, Reaman GH, Gaynon PS, Heerema NA. Clinical significance of Philadelphia chromosome positive pediatric acute lymphoblastic leukemia in the context of contemporary intensive therapies: a report from the Children's Cancer Group. *Cancer*. 83(9):2030-9, 1998 Nov 1.
- Heerema NA, Sather HN, Sensel MG, Kraft P, Nachman JB, Steinherz PG, Lange BJ, Hutchinson RS, Reaman GH, Trigg ME, Arthur DC, Gaynon PS, Uckun FM. Frequency and clinical significance of cytogenetic abnormalities in pediatric T-lineage acute lymphoblastic leukemia: a report from the Children's Cancer Group. *Journal of Clinical Oncology*. 16(4):1270-8, 1998 Apr.
- Uckun FM, Sensel MG, Sather HN, Gaynon PS, Arthur DC, Lange BJ, Steinherz PG, Kraft P, Hutchinson R, Nachman JB, Reaman GH, Heerema NA. Clinical significance of translocation t(1;19) in childhood acute lymphoblastic leukemia in the context of contemporary therapies: a report from the Children's Cancer Group. *Journal of Clinical Oncology*. 16(2):527-35, 1998 Feb.

Articles under review

Paynter RA, Hankinson SE, Colditz GA, Kraft P, Hunter DJ, De Vivo I. CYP19 (aromatase) haplotypes and endometrial cancer risk (provisionally accepted).
Litonjua, AA, Belanger K, Celedon, J, Milton D, Bracken MB, Kraft P, Triche EW, Weiss ST, Leaderer BP, Gold DR. Polymorphisms in the 5' region of the CD14 gene are associated with eczema in young children.
McGrath M, Lee IM, Hankinson SE, Kraft P, Hunter DJ, De Vivo I. Androgen receptor and endometrial cancer risk.

Teaching

Courses taught

Fundamental Concepts of Gene Mapping (with C Lange), 35 students per year, 2004-
Statistical Genetics of Complex Human Disease (with C Lange), 35 students per year, 2005-

Doctoral students supervised

Yu-Chun (Jean) Yen, 2004-
Genevieve Monsees, 2004-
Fangyi Gu, 2004-

Masters students supervised

Monica Ter-Minassian, 2004-
Deanna Petrochilos, 2004-

Doctoral committee membership

Stephanie Chiuve, Nutrition, 2004-
Amy Murphy, Biostatistics, 2004-
Jennifer Pai, Epidemiology, 2003-2004
Yadong Yang, Environmental Health, 2004
Monica McGrath, Epidemiology, 2003-2004

Select presentations

SNP selection for candidate gene studies (invited). AACR 26th Annual Meeting, Anaheim, April 18, 2005.
Genetic variation in HSD17B1 and risk of prostate cancer. AACR 26th Annual Meeting, Anaheim, April 17, 2005.
Design and analysis of candidate gene association studies using "tagging SNPs" (invited). Samuel Lunenfeld Research Institute, Toronto Canada, April 15, 2005.
Finding a needle in a stack of other needles: challenges and opportunities in human genome epidemiology (invited). Racebrook Environmental Statistics Retreat, November 6, 2004.
Efficient two-stage genome-wide association designs based on False Positive Report Probabilities. International Genetic Epidemiology Society Meeting, Noordwijkerhout the Netherlands, September 11-12, 2004.
Sources of measurement error in haplotype tagging studies of complex disease (invited). Joint Statistical Meetings, Toronto Canada, August 8-12, 2004.
Haplotypes in studies of gene \times environment interaction (invited). International HapMap Community Analysis Meeting. Baltimore, April 18-20, 2004.
From Genes And Environment To Gs And Es: Biological and Statistical Notions of Interaction, Harvard School of Public Health, Boston, 6 April 2004.
Haplotypes in studies of gene \times environment interaction (invited). International Conference on Analysis of Genomic Data. Boston, May 10-11, 2004.
A family-based test for correlation between gene expression and trait values, Kraft P and Horvath S, Annual Meeting of the International Genetic Epidemiology Society, New Orleans, 19 Nov 2002.
Assessing the impact of parents' genes on their children's disease risk, Kraft P, Hôpital Sainte-Justine, Montreal Canada, 22 Oct 2002.

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