Kenneth H. Buetow, Ph.D.
ISTB-1, 550 East Orange Street
P.O. Box 874804,
Tempe AZ 85287-4804
Phone: 480 727 9413
Fax: 480 727 0709
Kenneth.Buetow@asu.edu

EDUCATION

University of Pittsburgh Graduate School of Public Health, Department of Biostatistics, Human Genetics Program	Ph.D.	Human Genetics	1985
University of Pittsburgh, Pittsburgh, PA Graduate School of Public Health, Department of Biostatistics, Human Genetics Program	M.S. (Honors)	Human Genetics	1983
Indiana University, Bloomington, IN College of Arts and Sciences	B.A.	Biology	1980

PROFESSIONAL APPOINTMENTS

Faculty, ASU Center for Evolution, Medicine, and Public Health	2015
Honors Faculty, Barrett The Honors College, Arizona State University	2014-current
Director of Bioinformatics and Data Management, National Biomarker Development Alliance	2014-current
Director, Computational Science and Informatics Core Program, Complex Adaptive Systems Initiative, Arizona State University	2012-current
Professor, School of Life Sciences, College of Liberal Arts and Sciences, Arizona State University	2012-current
NCI Associate Director for Bioinformatics and Information Technology	2005-2012
Director, Center for Biomedical Informatics and Information Technology, Office of the Director, National Cancer Institute, Bethesda, MD	2006-2012
Director, NCI Center for Bioinformatics, Office of the Director National Cancer Institute, Bethesda, MD	2000-2006
Chief, Laboratory of Population Genetics, Division, Center for Cancer Research National Cancer Institute, Bethesda, MD	1998-2012
Special Assistant to the Director, Senior Genetics Network Chief, Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, MD	1997-1998
Adjunct Assistant Professor of Pediatrics, University of Pennsylvania School of Medicine, Philadelphia, PA	1992-1996
Member, Fox Chase Cancer Center, Philadelphia, PA	1992-1998
Associate Member, Fox Chase Cancer Center, Philadelphia, PA	1988-1992
Research Geneticist, Fox Chase Cancer Center, Philadelphia, PA	1987-1988
Postdoctoral Trainee, Fox Chase Cancer Center, Philadelphia, PA	1986-1987
Graduate Student Assistant, Human Genetics Program, University of Pittsburgh, PA	1981-1986

MEMBERSHIP IN MEDICAL AND SCIENTIFIC SOCIETIES

American College of Medical Informatics
American Association for the Advancement of Science
The Human Genome Organization
American Association for Cancer Research
Sigma Xi

EDITORIAL

Associate Editor for Cancer Research, Philadelphia	2003-2007
Associate Editor for Cancer Epidemiology, Biomarkers & Prevention, Philadelphia	1998-2002
Editor for chromosomes 4 and 22, Genome Data Base (GDB), Baltimore, MD	1992-1997

ADVISORY BOARDS/COMMITTEES

ASU Research Computing Committee	2015-date
NBDA Steering Committee	2014-date
iConquerMS Research Committee	2014-date
IO Bridge Molecular Profiling and Bioinformatics Advisory Group, Bristol-Myers Squibb Company	2013-date
DataNet Federation Consortium Advisory Board	2013-date
Internet 2 Life Sciences Research Program Advisory Committee	2012-2015
Data Liquidity Coalition Steering Committee	2012-date
DHHS Multi-Payer Claims Database Governance Committee Secretary	2012-2013
Turning the Tide Against Cancer Advisory Committee	2012-date
DHHS Multi-Payer Claims Database (MPCD) Governance Committee	2011-2013
Strategic Health IT Advanced Research Projects (SHARP) Steering Committee	2009-2012
FDA Sentinel Advisory Group	2008-2012
Open Health Tools Board of Governors	2007-2012
TCGA Project Team	2007-2012
NCI Clinical Trials Operation Committee	2007-2012
NCI Research Operations Committee	2007-2012
Trans-NIH Biomedical Informatics Coordinating Committee	2007-2012
NCI Executive Committee	2006-2012
NCI Translational Research Working Group	2005-2007
NCRI High Level Steering Committee	2004-2007
Chairperson NCI Implementation and Integration Team for Bioinformatics	2004-2006
Interagency Oncology Task Force Committee	2003-2012
NCI Clinical Trials Working Group	2002-2005
NCRI Cancer Bioinformatics Advisory Panel	2002-2004
NCI, Mammalian Gene Collection Steering Committee	2000-2007
NCI, Cancer Genome Anatomy Project (CGAP) Steering Committee	1998-2008
NCI, Genetic Annotation Initiative Steering Committee leader	1998-2001
University of Iowa Environmental Health Sciences Research Center (EHSRC)	1999-2002
NCI, Breast Cancer Think Tank Group	1998-1999
NCI Board of Scientific Counselors, Subcommittee A – Clinical Sciences of the NCI	1997-1998
Co-Chair NCI Cancer Bioinformatics Working Group	1997-2000
NCI Molecular Epidemiology Coordinating Group	1997-2001

NIEHS Environmental Genome Working Group	1997-2001
SmithKline Beecham Advisory Board for Computation in Discovery	1997-1998
DOD/NCI Consortium Breast Studies Steering Committee	1997-1999
Center for Inherited Disease Research (CIDR) Board of Governors	1997-2001
Center for Inherited Disease Research (CIDR) Access Committee, NIH	1997-1998
DOE Biological and Environmental Research Advisory Committee (BERAC)	1997-1998
NCI, Cancer Genetics Working Group, Committee Co-chairperson and Informatics Subcommittee leader	1996-2001
NCI, Division of Cancer Epidemiology and Genetics, Cooperative Family Registry for Breast Cancer Studies, Database Working Group member	1996-1999
American Association for Cancer Research Special Conference Committee	1996-1998
American Association for Cancer Research Program Committee	1996-1997
American Society of Human Genetics Database Committee, Chairman	1995-1998
Genome Data Base, Quarterly Review Committee	1995-1998
National Library of Medicine, Board of Scientific Counselors National Center for Biotechnology Information (NCBI)	1995-2000
NIH Human Genetic Mutant Cell Repository	1991-1994
UT M.D. Anderson Cancer Center, PO1 Program Project Advisory Board "Mutational Model for Childhood Cancer", Chairperson	1991-date
Operation Smile International, Norfolk, VA, Volunteer Coordinator of Research	1990-1993
NIH Epidemiology and Disease Control Study Section, Bethesda, MD	1990-1994

SCHOLARSHIPS AND AWARDS

AACC Outstanding Speaker Award	2015
Cloudera Data Impact Award Finalist	2014
Distinguished Mentor College of Liberal Arts and Science Residential College, ASU	2014
Fellow of the American College of Medical Information	2010
NIH Director's Award	2009
NIH Award of Merit	2009
Surgeon General's Certificate of Appreciation	2009
Bio-IT World Editor's Choice Best Practices	2008
Computerworld Award for Information Technology in Science	2006
Federal Top 100 Award for Information Technology	2005
NIH Award of Merit	2004
NCI Director's Gold Star Award	2004
Finalist for the Healthcare Innovation Technology Systems (HITS)	1996
Computerworld Smithsonian Award for Information Technology in Science	1995
American Society of Human Genetics Predoctoral Student Award Nominee	1985
University Honor Student, University of Pittsburgh	1983
Indiana University Residence Scholarship	1976-1980
Hoosier Scholar	1975-1980

TEACHING

Undergraduate Courses Taught:

Functional Genomics, BIO 440/MMB 440 2013-
Honors Thesis, BIO 492, BIO 493 2013-
Undergraduate Research, MBB BIO 495 2013-

Graduate Courses Taught:
Functional Genomics, MCB 540 2013-

Ph.D. Theses Chair:
Chaoxing Li

Ph.D. Theses Committee:
2015, Wang Lu
2015, Carrie Jenkins

M.S Theses Committee:
2015, Anup Abraham

Honors Theses Chair:
2016, Jacob Randall, Biological Sciences
2016, Ardesher Aghili, Biological Sciences
2015, Abhinav Mishra, Biological Sciences
2014, Chantell Ferrell, Biological Sciences
2014, Abhinav Mishra, Biological Sciences

Research Support

Ongoing Research Support

Bristol Myers Squibb: Immune Simulator of in Silico Research Relevant to Immune-Based Oncology Drug Targets, $2,263,345, Buetow (PI), 12/13-12/16

PCORI - ACP (Accelerated Cure Project): A Multiple Sclerosis Patient-Powered Research Network, $940,293, McBurney (PI) Buetow (Co-I), 1/13-10/18

National Science Foundation: BD Spokes: SPOKE: WEST: Accelerating and Catalyzing Reproducibility in Scientific Computation and Data Synthesis, $1,014,593 Barton (PI) Buetow (Co-PI) 9/16-9/19

Completed Research Support

From 1998 - 2012, Dr. Buetow was a member of the Center for Cancer Research of the National Cancer Institute's, NIH Intramural Program. Since 1998 he was Chief of the Laboratory of Population Genetics (LPG). In 2011 the LPG had a staff of 28 FTEs (16 Ph.D or M.D.) with an annual budget of approximately $3.5 million

From 2000-2012 Dr. Buetow directed the National Cancer Institute's enterprise informatics efforts. Administered out of the office of the NCI Director, Dr. Buetow was the founding Director first of the NCI Center for Bioinformatics which later expanded to become the NCI Center for Biomedical Informatics and Information Technology (CBIIT). In 2011 CBIIT has a staff of over 60 FTEs and an annual budget of approximately $100 million.

RR011907 **Buetow (PI)** **02/15/97 – 02/15/98**
NCRR
Automated Sequence/Genotype Support for Cancer Genetics

R01CA061158 **Buetow (PI)** **08/15/93 – 06/01/98**
NCI
Genetic Susceptibility to Lung Cancer

P50HG000835 **Buetow (PI)** **09/25/92 – 08/31/96**
NHGRI
Cooperative Human Linkage Center (Murray PI): Analytic Construction and Evaluation of Meiotic Index Maps

P50HG000835 **Buetow (PI)** **09/25/92 – 08/31/96**
NHGRI
Cooperative Human Linkage Center (Murray PI): Core – Informatics Core

P50HG000425 **Emanuel (PI)** **05/06/91 – 04/30/96**
NHGRI
Human Genome Center for Chromosome 22

P50HG000206 **Myers (PI)** **09/30/90 – 11/30/95**
NHGRI
Fine-Structure Mapping of Human Chromosome 4

P01CA040737 **Buetow (PI)** **12/15/88 – 06/01/98**
NCI
Genetic Epidemiology of Primary Hepatocellular Carcinoma

R29CA047816 **Buetow (PI)** **08/01/88 – 07/31/93**
NCI
Genetic Changes in Primary Hepatocellular Carcinoma

R01HG000355 **Murray (PI)** **07/28/88 – 08/31/93**
NHGRI
Detailed Mapping and Recombination of Chromosome Four

R01DE008559 **Murray (PI)** **07/01/88 – 07/29/98**
NIDCR
Molecular Genetic Epidemiology of Cleft Lip and Palate

PUBLICATIONS

1. Lebo, R.V. Chakravarti, A. Buetow, K.H. Cheung, M.C., Cann, H. Cordell, B. and Goodman, H. *Recombination within and between the human insulin and-globin gene loci*. Proc. Natl. Acad. Sci. *USA* 80:4808-4812, 1983.
2. Chakravarti, A. Li, C.C. and Buetow, K.H. *Estimation of marker gene frequency and linkage disequilibrium from conditional marker data.* Am. J. Hum. Genet. 36:177-186, 1984.

3. Chakravarti, A., Phillips, J.A., Mellits, K.H. Buetow, K.H. and Seeburg, P.H. *Patterns of polymorphism and linkage disequilibrium suggest independent origins of the human growth hormone cluster*. Proc. Natl. Acad. Sci. USA 81:6085-6089, 1984.

4. Chakravarti, A. Buetow, K.H. Antonarakis, S.E. Waber, P.G. Boehm, C.D. and Kazazian, H.H. *Non-uniform recombination within the human-globin gene cluster.* Am. J. Hum. Genet. 36:1239-1258, 1984.

5. Matteson, K.J. Ostrer, H. Chakravarti, A., Buetow, K.H. O'Brien, W.E. Beaudet, A.L. and Phillips, J.A. *A study of restriction fragment length polymorphisms at the alpha-l-antitrypsin locus.* Hum. Genet. 69:263-267, 1985.

6. Chakravarti, A. and Buetow, K.H. *A strategy for using multiple linked markers for genetic counseling*. Am. J. Hum. Genet. 37:984-997, 1985.

7. Chakravarti, A. Buetow, K.H. Antonarakis, S.E. Waber, P.G. Boehm, C.D. and Kazazian, H.H. *Non-uniform recombination within the human β-globin gene cluster: A reply to B.S. Weir and W.G. Hill*. Am. J. Hum. Genet. 38:779, 1986.

8. Murray, J.C. Buetow, K.H. and Bell, G.I. *RFLPs for transforming growth factor alpha (TGFA) gene at 2p13.* Nucleic Acids Res. 14:7136, 1986.

9. Buetow, K.H. Chakravarti, A. and Cole, S. *A genetic map of human chromosome 11p.* Genet. Epidemiol. l:135-140, 1986.

10. Badner, J.A. Chakravarti, A. and Buetow, K.H. *Linkage analysis between Huntington Disease and the G8 marker locus.* Genet. Epidemiol. sl:211-216, 1986.

11. Tsui, L-C. Buetow, K.H. and Buchwald, M. *Genetic analysis of cystic fibrosis using linked DNA markers*. *Am. J.* Hum. Genet. 39:720-729, 1986.

12. Buetow, K.H. and Chakravarti, A. *Multipoint mapping using seriation: I. General methods*. Am. J. Hum. Genet. 41:180-188, 1987.

13. Buetow, K.H. and Chakravarti, A. *Multipoint mapping using seriation: II. Analysis of simulated and empirical data.* Am. J. Hum. Genet. 41:189-201, 1987.

14. Murray, J.C. Buetow, K.H. Donovan, M. Hornung, S. Motulsky, A.G. Disteche, C. Dyer, K. Swisshelm, K. Anderson, J. Giblett, E. Sadler, E. Eddy, R. and Shows, T.B. *Linkage disequilibrium of plasminogen polymorphisms and assignment of the gene to human chromosome 6q26 - 6q27*. Am. J. Hum. Genet. 40:338-350, 1987.

15. Murray, J.C. Shiang, R. Carlock, L.R. Smith, M. and Buetow, K.H. *Rapid RFLP screening procedure identifies new polymorphisms at albumin and alcohol dehydrogenase loci*. Hum. Genet. 76:278-282, 1987.

16. Ferrell, R.E. Buetow, K.H. Darby, J.K. Eichner, J.E. Murray, J.C. Smith, R. Waziri, M. Huson, S. and Riccardi, V.M. *Von Recklinghausen Neurofibromatosis: A linkage study of candidate and random marker genes.* J. Med. Genet. 24:522-524, 1987.

17. Murray, J.C. Buetow, K.H. Smith, M. Carlock, L. Chakravarti, A. Ferrell, R.F. Gedamu, L. Gilliam, C. Shiang, R. and DeHaven, C.R. *Pairwise linkage analysis of 11 loci on human chromosome 4*. Am. J. Hum. Genet. 42:490-497, 1988.

18. Berdahl, L.D. Smith, R.F. Murray, J.C. and Buetow, K.H. *A TaqI RFLP demonstrated for pIBS17 (D4S123), a single copy sequence on chromosome 4*. Nucleic Acids Res. 16:2743, 1988.

19. Nishimura, D. Buetow, K.H. Yamada, Y. and Murray, J.C. *RFLPs and linkage relationships of the human laminin B2 gene.* Genomics 3:393-395, 1988.

20. Murray, J.C. Buetow, K.H. Ferrell, R.E. Sieberg, P.D. and Fukuda, M. *An RFLP for glycophorin A (MN) is in linkage disequilibrium with MN and Ss.* Cytogenet. Cell Genet. 47:149-151, 1988.

21. London, W.T. and Buetow, K.H. *Hepatitis B virus and primary hepatocellular carcinoma*. Cancer Invest. 6:317-326, 1988.

22. Smith M, Weiss MJ, Griffin CA, Murray JC, Buetow KH, Emanuel BS, Henthorn PS, Harris H. *Regional assignment of the gene for human liver/bone/kidney alkaline phosphatase to chromosome 1p36.1-p34.* Genomics. 1988 Feb;2(2):139-43.

23. Shiang, R. Murray, J.C. Morton, C.C. Buetow, K.H. Wasmuth, J.J. Olney, A.H. Sanger, W.G. and Goldberger, G. *Mapping of the human complement factor I gene to 4q25*. Genomics 4:1-5, 1989.

24. Cutting, G.R. Antonarakis, S.E. Buetow, K.H. Kasch, L.M. Rosenstein, B.J. and Kazazian, H.H. *Analysis of DNA polymorphism haplotypes linked to the Cystic Fibrosis locus in North American Black and Caucasian families support the existence of multiple mutations of the Cystic Fibrosis gene.* Am. J. Hum. Genet. 44:307-318, 1989.

25. Cox, D.R. Murray, J.C. and Buetow, K.H. *Report of the committee on the genetic constitution of chromosome 4. Cytogenet.* Cell Genet. 51:121-136, 1989.

26. Buetow, K.H. Murray, J.C. Israel, J.L. London, W.T. Smith, M. Kew, M. Blanquet, V. Brechot, C. Redeker, A. and Govindarajan, S. *Loss of heterozygosity suggests tumor suppressor gene responsible for primary hepatocellular carcinoma.* Proc. Natl. Acad. Sci. *USA* 86:8852-8856, 1989.

27. Ardinger, H.H. Buetow, K.H. Bell, G.I. Bardach, J. VanDemark, D.R. and Murray, J.C. *Association of genetic variation of the transforming growth factor-alpha gene with cleft lip and palate.* Am. J. Hum. Genet. 45:348-353, 1989.

28. Theilmann, J. Kanani, S. Shiang, R. Robbins, C. Quarrell, O. Huggins, M. Hedrick, A. Weber, B. Collins, C. Buetow, K.H. Murray, J.C. and Hayden, M.R. *Non-random association between alleles detected by D4S95 and the Huntington disease gene.* J. Med. Genet. 26(11):676-81, 1989.

29. Murray, J.C. Nishimura, D.Y. Buetow, K.H. Ardinger, H.H. Spence, M.A. Sparkes, R.S. Falk, R.E. Falk, P.M. Gardner, R.J.M. Harkness, E.M. Glinski, L.P. Pauli, R.M. Nakamura, Y. Green, P.P. and Schinzel, A. *Linkage of an autosomal dominant clefting syndrome (Van der Woude) to loci on chromosome 1q*. Am. J. Hum. Genet. 46:486-490, 1990.

30. Mathews, K.D. Ardinger, H.H. Nishimura, D.Y. Buetow, K.H. Murray, J.C. and Bartley, J.A. *Linkage localization of Börjeson-Forssman-Lehmann syndrome.* Am. J. Med. Genet. 34:470-474, 1989.

31. Mathews, K.D. Buetow, K.H. Turner, G. and Mulley, J. *Börjeson-Forssman-Lehmann syndrome localization.* Am. J. Med. Genet. 34:475, 1989.

32. Israel, J. Unger, E. Buetow, K.H. Brown, T. Blumberg, B. and London, W. T. *Correlation between liver iron content and magnetic resonance imaging in rats.* Magn. Reson. Imaging 7:629-634, 1989.

33. Stambolian, D. Lewis, R.A. Buetow, K.H. Bond, A. and Nussbaum, R. *Nance-Horan Syndrome: Localization within the region Xp21.1-Xp22.3 by linkage analysis*. Am. J. Hum. Genet. 47:13-19, 1990.

34. Buetow, K.H. Nishimura, D. Nakamura, Y. Jiang, O. and Murray, J.C. *A detailed multipoint gene map of chromosome 1q*. Genomics 8:13-21, 1990.

35. Buetow, K.H. Shiang, R. Yang, P. Nakamura, Y. Lathrop, G.M. White, R., Wasmuth, J., Wood, S., Berdahl, L., Leysens, N., Ritty, T., Wise, M. and Murray J.C. *A detailed multipoint map of human chromosome 4 provides evidence for linkage heterogeneity and position specific recombination rates*. Am. J. Hum. Genet 48:911-925, 1991.

36. Keats, B., Sherman, S., Morton, N.E., Robson, E., Buetow, K.H., Cartwright, P., Chakravarti, A., Francke, U., Green, P.P. and Ott, J. *Guidelines for human linkage maps. An international system for human linkage maps (ISLM, 1990*). Genomics 9:557-560, 1991.

37. Dracopoli, N.C. O'Connell, P. Elsner, T.I. Lalouel, J-M. White, R.L. Buetow, K.H. Nishimura, D.Y. Murray, J.C. Helms, C. Mishra, S.K. Donis-Keller, H. Hall, J.M. Lee, M.K. King, M-C. Attwood, J. Morton, N.E. Robson, E.B. Mahtani, M. Willard, H. Royle, N. Patel, I. Jeffreys, A. Verga, V. Jenkins, T. Weber, J. Mitchell, A. and Bale, A. *The CEPH consortium linkage map of human chromosome 1.* Genomics 9:686-700, 1991.

38. Adam, S. Theilmann, J. Buetow, K. Hedrick, A. Collins, C. Weber, B. Huggins, M. and Hayden, M. *Linkage disequilibrium and modification of risk for Huntington disease.* Am. J. Hum. Genet. 48:595-603, 1991.

39. Buetow, K.H. *Influence of aberrant observations on high resolution linkage analysis outcomes.* Am. J. Hum. Genet. 49:985-994, 1991.

40. Hecht, J.T. Yang, P. Michels, V.V. and Buetow, K.H. *Complex segregation analysis of nonsyndromic cleft lip and palate*. Am. J. Hum. Genet. 49:674-681, 1991.

41. Shields, D.C. Collins, A. Buetow, K.H. Morton, N.E. *Error filtration, interference, and the human linkage map.* Proc. Natl. Acad. Sci. *USA* 88:6501-6505, 1991.

42. Murray, J.C. and Buetow, K.H*. The chromosome 4 workshop report*. Genomics 12:857-858, 1992.

43. Buetow, K.H. Sheffield, V. Zhu, M. Zhou, T. Shen, F-M. Hino, O. Smith, M. McMahon, B.J. Lanier, A.P. London, W.T. Redeker, A.G. Govindarajan, S. *Low frequency of p53 mutations observed in a diverse collection of primary hepatocellular carcinomas.* Proc. Natl. Acad. Sci. *USA* 89:9622-9626, 1992.

44. Buetow, K.H. *Genetic studies of human primary hepatocellular carcinoma*. In: Comparative Molecular Carcinogenesis, A.J.P. Klein-Szanto, M.W. Anderson, J.C. Barrett, T.J. Slaga, eds., John Wiley & Sons, Inc., New York 1992.

45. Schisselbauer, J. Hogan, M. Buetow, K.H. Tew, K. *Heterogeneity of Glutathione S-transferase enzyme and gene expression in ovarian carcinoma.* Pharmacogenet. 2:63-72, 1992.

46. Mills, K.A. Buetow, K.H. Xu, Y. Weber, J.L. Altherr, M.R. Wasmuth, J.J. Murray, J.C*. Genetic and physical maps of human chromosome 4 based on dinucleotide repeats.* Genomics 14:209-219, 1992.

47. Murray, J.C. Bennett, S.R. Kwitek, A.E. Small, K.W. Schinzel A. Alward, W.L.M. Weber, J.L. Bell, G.I. Buetow, K.H. *Linkage of Rieger syndrome to the region of the epidermal growth factor gene on chromosome 4.* Nature Genet. 2:46-49, 1992.

48. NIH/CEPH Collaborative Mapping Group*. A comprehensive genetic linkage map of the human genome*. Science 258:67-86, 1992.

49. Mills, K.A. Buetow, K.H. Xu, Y. Ritty T.M. Mathews K.D. Bodrug, S.E. Wijmenga, C. Balazs, I. Murray J.C. *Genetic and physical mapping on chromosome 4 narrows the localization of the gene for facioscapulohumeral muscular dystrophy (FSHD).* Am. J. Hum. Genet. 51:432-439, 1992.

50. Stadler, H.S. Padanilam, B.J. Buetow, K. Murray J.C. Solursh, M. *Identification and genetic mapping of a homeobox gene to the 4p16.1 region of human chromosome 4.* Proc. Natl. Acad. Sci. USA 89:11579-1583, 1992.

51. Crall MG, Schuler CF, Buetow KH, Murray JC. *Genetic marker study of dentinogenesis imperfecta.* Proc. Proc Finn Dent Soc. 1992;88 Suppl 1:285-93.

52. Gasser DL, Yang P, Buetow KH. *Palate teratogenicity and embryotoxicity of cyclosporin A in mice.* J Craniofac Genet Dev Biol. 1992 Jul-Sep;12(3):155-8.

53. Padanilam BJ, Stadler HS, Mills KA, McLeod LB, Solursh M, Lee B, Ramirez F, Buetow KH, Murray JC. *Characterization of the human HOX 7 cDNA and identification of polymorphic markers.* Hum Mol Genet. 6:407-10, 1992

54. Hino, O, Testa, J.R. Buetow, K.H. Taguchi, T. Zhou, J.Y. Bremer, M. Bruzel, A. Yeung, R. Levan, G. Levan, K. Knudson, A.G. Tartof, K.D. *Universal mapping probes and the origin of human chromosome 3.* Proc. Natl. Acad. Sci. USA 90:730-734, 1993.

55. Sassani, R. Bartlett, S.P. Feng, H. Goldner-Sauve, A. Haq, A.K. Buetow, K.H. Gasser, D.L. *Association between alleles of the transforming growth factor-alpha locus and the occurrence of cleft lip*. Am. J. Med. Genet. 45:565-569, 1993.

56. Schalling, M. Hudson, T.J. Buetow, K.H. Housman D.E. *Direct detection of novel expanded trinucleotide repeats in the human genome*. Nature Genet. 4:135-139, 1993.

57. Farrall, M. Buetow, K.H. Murray, J.C. *Resolving an apparent paradox concerning the role of TGFA in CL/P.* Am. J. Hum. Genet. 52:434-436, 1993.

58. Yeung, R.S. Buetow, K.H. Testa, J.R. Knudson, A.G. *Susceptibility to renal carcinoma in the Eker rat involves a tumor suppressor gene on chromosome 10.* Proc. Natl. Acad. Sci. *USA* 90:8032-8042, 1993.

59. Rebbeck, T.R. Dietz, F. Murray, J.C. Buetow, K.H. *A single-gene explanation for the probability of having idiopathic talipes equinovarus.* Am. J. Hum. Genet. 53:1051-1063, 1993.

60. Buetow, K.H. Duggan, D. Yang, B. Ludwigsen, S. Puck, J. Porter, J. Budarf, M. Spielman, R. Emanuel, B.S. *A microsatellite-based multipoint index map of human chromosome 22.* Genomics 18:329-339, 1993.

61. Loftus, S.K. Edwards, S.J. Scherpbier-Heddema, T. Buetow, K.H. Wasmuth, J.J. Dixon, M.J. *A combined genetic and radiation hybrid map surrounding the Treacher Collins syndrome locus on chromosome 5q.* Hum. Mol. Genet. 2:1785-1792, 1993.

62. Sherrington, R. Mankoo, B. Attwood, J. Kalsi, G. Curtis D. Buetow, K. Povey, S. Gurling, H. *Cloning of the human dopamine D5 receptor gene and identification of a highly polymorphic microsatellite for the DRD5 locus that shows tight linkage to the chromosome 4p reference marker RAF1P1*. Genomics 18:423-425, 1993.

63. Yeung, R.S. Hino, O. Vilensky, M. Buetow, K. Szpirer, C. Szpirer, J. Klinga-Levan, K., Levan, G. Knudson, A.G. *Assignment of 22 loci in the rat by somatic hybrid and linkage analysis*. Mamm. Genome 4:585-588, 1993.

64. Kwitek-Black, A. Carmi, R. Duyk, G.M. Buetow, K.H. Elbedour, K. Parvari, R. Yandava, C.N. Stone, E.M. Sheffield, V.C. *Linkage of Bardet-Biedl syndrome to chromosome 16q and evidence for non-allelic genetic heterogeneity.* Nature Genet. 5:392-396, 1993.

65. Shiang, R. Lidral, A.C. Ardinger H.H. Buetow, K.H. Rometti, P.A. Munger, R.G. Murray, J.C. *Association of transforming growth factor alpha gene polymorphisms with nonsyndromic cleft palate only (CPO).* Am. J. Hum. Genet. 53:836-843, 1993.

66. Emanuel, B.S. Buetow, K. Nussbaum, R. Scambler, P. Lipinski, M. Overton, G.C. *Report of the third international workshop on human chromosome 22 mapping*. Cytogenet. Cell Genet. 63:206-11, 1993.

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