Kerry Kocher Brown, Ph.D., FACMG

CURRENT POSITION
Connective Tissue Gene Tests, LLC, Allentown, PA
Associate Medical Director, January 2013-present

EDUCATION
Harvard Medical School Genetics Training Program, Boston, MA
Clinical Molecular Genetics and Clinical Cytogenetics Fellowships, July 2008-June 2011

Harvard Medical School, Boston, MA
PhD in Biological and Biomedical Sciences, concentration in genetics, June 2008

Villanova University, Villanova, PA
BS in Biology, *summa cum laude*, May 1999
BS in Computer Science, *summa cum laude*, May 1998
Phi Beta Kappa, Phi Kappa Phi, Upsilon Pi Epsilon National Honor Societies

BOARD CERTIFICATIONS
American Board of Medical Genetics, Clinical Molecular Genetics, October 2011
American Board of Medical Genetics, Clinical Cytogenetics, October 2011

PROFESSIONAL/RESEARCH EXPERIENCE
Connective Tissue Gene Tests, LLC, Allentown, PA
Associate Medical Director, January 2013-present

Brigham and Women's Hospital, Department of Medicine, Boston, MA
Research Fellow in the Laboratory of Drs. Jonathan and Christine Seidman, Division of Cardiovascular Genetics, July 2010-December 2012

Brigham and Women's Hospital, Department of Pathology, Boston, MA
Clinical Cytogenetics Fellow at the Brigham and Women's Hospital Cytogenetics Laboratory, July 2009-June 2010

Partners Healthcare Center for Personalized Genetic Medicine, Cambridge, MA
Clinical Molecular Genetics Fellow at the Laboratory for Molecular Medicine, July 2008-June 2009

Harvard Medical School, Department of Genetics, Boston, MA
Graduate Student in the Laboratory of Dr. Cynthia Morton, May 2003-June 2008
Thesis Research: Discovery of novel auditory genes through cytogenetic approaches

Harvard Medical School, Department of Genetics, Boston, MA
Rotation Student in the Laboratory of Dr. Gary Gilliland, January 2003-April 2003

Whitehead Institute/MIT Center for Genome Research (now the Broad Institute of MIT and Harvard), Cambridge, MA
Research Assistant in the Inflammatory Disease Research Group, September 2000-August 2002

Merck & Co., Inc., West Point, PA
Systems Analyst with Clinical Information Services, August 1998-August 2000

PROFESSIONAL SERVICE ACTIVITIES

American College of Medical Genetics Laboratory Quality Assurance Committee
Trainee member, March 2010 – March 2012

MEMBERSHIPS

American College of Medical Genetics and Genomics, fellow
American Society of Human Genetics, member

TEACHING EXPERIENCE

Harvard Medical School, Boston, MA
Teaching Assistant for graduate level class: Principles of Genetics (Genetics 201), Fall 2003

Villanova University, Villanova, PA
Tutor for computer science department, September 1995-May 1998

GRANTS AND AWARDS

Post-doctoral National Research Service Award (T32 GM007748)
National Institute of General Medical Sciences, July 2010-November 2011

2011 Alice and YT Chen ACMG Annual Meeting Scholarship
American College of Medical Genetics Foundation, March 2011

Partners in Excellence Award
Partners Healthcare, December 2009

Pre-doctoral National Research Service Award (F31 DC007540)
National Institute on Deafness and Other Communication Disorders, January 2005-December 2007

2007 National Institutes of Health Graduate Student Research Festival
National Institutes of Health, October 2007

6th Molecular Biology of Hearing and Deafness Conference - Trainee Fellowship
Deafness Research Foundation, July 2007

2007 Biomedical Research Institute Research Excellence Award
Brigham and Women's Hospital Biomedical Research Institute, June 2007

Albert J. Ryan Fellowship
The Albert J. Ryan Foundation, March 2004

Villanova Scholars Half Tuition Scholarship
Villanova University, August 1994-May 1998

Pascal Medal
Villanova University, May 1998

Outstanding Computer Science Student Scholarship
Villanova University, October 1997

PUBLICATIONS
Papers

Currall BB, Wong KE, Robertson NG, Lunardi A, Reschke M, Hickox AE, Yin Y, **Brown KK**, Williamson RE, Ivanov A, Shen J, Quade BJ, Signoretti S, Arnos KS, Banks AS, Liberman MC, Pandolfi PP, Morton CC. Convergent genomic evidence reveals role for a poorly annotated gene in prostate cancer, hearing loss, and obesity. *In press.*

Anger GJ, Crocker S, McKenzie K, **Brown KK**, Morton CC, Harrison K, MacKenzie JJ. X-linked deafness-2 (DFNX2) phenotype associated with a paracentric inversion upstream of POU3F4. *Am J Audiol*. 2014 Mar 1;23(1):1-6.

Brown KK, Viana LM, Helwig CC, Artunduaga MA, Quintanilla-Dieck L, Jarrin P, Osorno G, McDonough B, DePalma SR, Eavey RD, Seidman JG, Seidman CE. *HOXA2* haploinsufficiency in dominant bilateral microtia and hearing loss. *Hum Mutat*. 2013 Oct;34(10):1347-51.

Rehm HL, Bale SJ, Bayrak-Toydemir P, Berg JS, **Brown KK**, Deignan JL, Friez MJ, Funke BH, Hegde MR, Lyon E. ACMG clinical laboratory standards for next-generation sequencing. *Genet Med.* 2013 Sep;15(9):733-47.

Zaidi S, Choi M, Wakimoto H, Ma L, Jianming J, Overton JD, Romano-Adesman A, Bjornson RD, Breitbart R, **Brown KK**, Carriero NJ, Cheung YH, Deanfield J, DePalma S, Fakhro KA, Glessner J, Hakonarson H, Italia MJ, Kaltman JR, Kaski J, Kim R, Kline JK, Lee T, Leipzig J, Lopez A, Mane SM, Mitchell LE, Newburger JW, Parfenov M, Pe'er I, Porter G, Roberts AE, Sachidanandam R, Sanders SJ, Seiden HS, State MW, Subramanian S, Tikhonova IR, Wang W, Warburton D, White PS, Williams IA, Zhao H, Seidman JG, Brueckner M, Chung WK, Gelb BD, Goldmuntz E, Seidman CE, Lifton RP. *De novo* mutations in histone-modifying genes in congenital heart disease. *Nature*. 2013 Jun 13;498(7453):220-223.

Brown KK, Rehm HL. Molecular diagnosis of hearing loss. *Curr Protoc Hum Genet*. 2012 Jan; Chapter 9:Unit 9.16.

Kearney HM, Thorland EC, **Brown KK**, Quintero-Rivera F, South ST. American College of Medical Genetics standards and guidelines for interpretation and reporting of postnatal constitutional copy number variants. Genet Med. 2011 Jul;13(7):680-685.

Brown KK, Reiss JA, Crow K, Ferguson HL, Kelly C, Fritzsch B, Morton CC. Deletion of an enhancer near *DLX5* and *DLX6* in a family with hearing loss, craniofacial defects, and an inv(7)(q21.3q35). *Hum Genet*. 2010 Jan;127(1):19-31.

Brown KK, Alkuraya FS, Matos M, Robertson RL, Kimonis VE, Morton CC. *NR2F1* deletion in a patient with a *de novo* paracentric inversion, inv(5)(q15q33.2), and syndromic deafness. *Am J Med Genet A*. 2009 May;149A:931-938.

Higgins AW, Alkuraya FS, Bosco AF, **Brown KK**, Bruns GAP, Donovan DJ, Eisenman R, Fan Y, Farra CG, Ferguson HL, Gusella JF, Harris DJ, Herrick SR, Kelly C, Kim HG, Kishikawa S, Korf BR, Kulkarni S, Lally E, Leach NT, Lemyre E, Lewis J, Ligon AH, Lu W, Maas RL, MacDonald ME, Moore SDP, Peters RE, Quade BJ, Quintero-Rivera F, Saadi I, Shen Y, Shendure J, Williamson RE, Morton CC. Characterization of apparently balanced chromosomal rearrangements from the Developmental Genome Anatomy Project. *Am J Hum Genet*. 2008 Mar;82:712-722.

Brown KK, Morton CC. Discoveries in genetics advance hearing research and care. *Hearing Health* 2005 Winter; 21(4): 20-2.

Rioux JD, Karinen H, **Kocher K**, McMahon SG, Karkkainen P, Janatuinen E, Heikkinen M, Julkunen R, Pihlajamaki J, Naukkarinen A, Kosma VM, Daly MJ, Lander ES, Laakso M. Genomewide search and association studies in a Finnish celiac disease population: Identification of a novel locus and replication of the *HLA* and *CTLA4* loci. *Am J Med Genet A*. 2004 Nov 1;130(4):345-50.

Chen J, Wall NR, **Kocher K**, Duclos N, Fabbro D, Neuberg D, Griffin JD, Shi Y, Gilliland DG. Stable expression of small interfering RNA sensitizes *TEL-PDGFbetaR* to inhibition with imatinib or rapamycin. *J Clin Invest*. 2004 Jun; 113(12):1784-91.

Williams CN, **Kocher K**, Lander ES, Daly MJ, Rioux JD. Using a genome-wide scan and meta-analysis to identify a novel IBD locus and confirm previously identified IBD loci. *Inflamm Bowel Dis*. 2002 Nov;8(6):375-81.

Vermeire S, Wild G, **Kocher K**, Cousineau J, Dufresne L, Bitton A, Langelier D, Pare P, Lapointe G, Cohen A, Daly MJ, Rioux JD. *CARD15* genetic variation in a Quebec population: prevalence, genotype-phenotype relationship, and haplotype structure. *Am J Hum Genet*. 2002 Jul;71(1):74-83.

Rioux JD, Daly MJ, Silverberg MS, Lindblad K, Steinhart H, Cohen Z, Delmonte T, **Kocher K**, Miller K, Guschwan S, Kulbokas EJ, O'Leary S, Winchester E, Dewar K, Green T, Stone V, Chow C, Cohen A, Langelier D, Lapointe G, Gaudet D, Faith J, Branco N, Bull SB, McLeod R, Griffiths AM, Bitton A, Greenberg GR, Lander ES, Siminovitch KA, Hudson TJ. Genetic variation in the 5q31 cytokine gene cluster confers susceptibility to Crohn's disease. *Nat Genet* 2001 Oct; 29(2):223-8.

Thesis

Brown KK. Identification of auditory genes and regulatory elements using a cytogenetic approach. Boston (MA): Harvard Medical School; 2008.

Talks Presented at Scientific Meetings

Brown KK, Williamson R, Arnos K, Crow KS, Reiss JA, Morton CC. Cytogenetic approaches for identifying novel genes and regulatory elements associated with hearing loss. Platform presentation given at the 57th Annual Meeting of the American Society of Human Genetics, San Diego, CA, October 2007.

Posters Presented at Scientific Meetings

Brown KK, Giovanni M, Weremowicz S, Murray M. Cytogenetic characterization of a Y;14 translocation in a male with gynecomastia and androgenic alopecia. Poster presented at the 2010 ACMG Annual Clinical Genetics Meeting, Albuquerque, NM, March 2010.

Brown KK, Williamson R, Arnos K, Crow KS, Reiss JA, Morton CC. Cytogenetic approaches for identifying novel genes and regulatory elements associated with hearing loss. Poster presented at the 6th Molecular Biology of Hearing and Deafness Conference, Cambridge, UK, July 2007.

Kocher K, Crow KS, Reiss JA, Morton CC. Dysregulation of *DLX5* by position effect in a family with a novel phenotype of craniofacial defects and hearing loss. Poster presented at the 11th International Congress of Human Genetics, Brisbane, Australia, August 2006.

Kocher K, Morton CC. Cytogenetic approaches to identifying genes for hearing impairments: gene discovery in an inv(7)(q21q35) and an inv(5)(q15q33.2). Poster presented at the 55th Annual Meeting of the American Society of Human Genetics, Salt Lake City, UT, October 2005.

Kocher K, Morton CC. Cytogenetic approaches to identifying genes for hearing impairments: gene discovery in an inv(7)(q21q35) and an inv(5)(q15q33.2). Poster presented at The mouse as an instrument for ear research II workshop at the Jackson Laboratories, Bar Harbor, ME, October 2005.

Kocher K, Morton CC. Syndromic hearing loss associated with a familial inversion of 7q. Poster presented at the 54th Annual Meeting of the American Society of Human Genetics, Toronto, Canada, October 2004.

Kocher K, Morton CC. Syndromic hearing loss associated with a familial paracentric inversion of the long arm of chromosome 7. Poster presented at the 5th conference on Molecular Biology of Hearing and Deafness, Bethesda, MD, October 2004.