UNIVERSITY OF PENNSYLVANIA - PERELMAN SCHOOL OF MEDICINE Curriculum Vitae

Jennifer J.D. Morrissette, Ph.D.

Address: 201 John Morgan Building, Department of Pathology, 3620 Hamilton Walk,

University of Pennsylvania Philadelphia, PA 19104 USA

Education:

1986	B.S.	State University of New York at Buffalo (Molecular Biology)
1992	Ph.D.	State University of New York at Buffalo (Molecular Genetics)

Postgraduate Training and Fellowship Appointments:

1992-1997	Postdoctoral Fellow, Molecular Genetics, Department of
	Pathology, Harvard Medical School, Boston
1998-2002	Fellow in Genetics, The Children's Hospital of Philadelphia,
	Philadelphia, PA

Faculty Appointments:

Hospital and/or Administrative Appointments:

2007-2010	Medical Professional Staff, St Christopher's for Hospital,
	Philadelphia, PA
2010-present	Scientific Director, Cancer Cytogenetics, University of
	Pennsylvania, School of medicine, Department of Pathology
	and Laboratory Medicine
2011-present	Clinical Director, Center for Personalized Diagnostics,
	Hospital of the University of Pennsylvania, University of
	Pennsylvania

Other Appointments:

1997 Senior Research Biochemist, Merck Sharp and Dohme, Inc.

Specialty Certification:

2002	American Board of Medical Genetics, Clinical Cytogenetics
2012	Recertification, American Board of Medical Genetics, Clinical
	Cytogenetics
2002	American Board of Medical Genetics, Clinical Molecular
	Genetic Diagnostics
2012	Recertification, American Board of Medical Genetics, Clinical
	Molecular Genetic Diagnostics
2004-2014	New York State Certificate of Qualification, Cytogenetics and
	Molecular Genetic Diagnostics

Awards, Honors and Membership in Honorary Societies:

1990	Mark Diamond Initiative Award, Department of Biological
	Sciences, State University of New York at Buffalo
1992	Pathobiology of Cancer: The Edward A. Smuckler Memorial
	Workshop, Keystone Colorado, American Association of
	Cancer Research
1992-1993	NIH Intramural Research Training Award fellowship
1994-1996	American Social Health Association/Burroughs Wellcome
	Fund Research Fellowship
1996-1997	American Association of Cancer Research Fellowship
2001-2005	General Clinical Research Center (GCRC). Children's
	Hospital of Philadelphia, Investigator
2003-2004	Foerderer Fund for Excellence, Molecular and Cytogenetic
	Analysis of Autism

Memberships in Professional and Scientific Societies and Other Professional Activities:

2006-Present	American Cytogenetics Conference
2011-Present	Association of Molecular Pathology
1998-Present	American Society Human Genetics
2005-Present	American College of Medical Genetics
2004-Present	Philadelphia Genetics Group

Editorial Positions:

Manuscript review for American Journal of Medical Genetics
Prenatal Diagnosis
Cancer Genetics and Cytogenetics
Journal of Molecular Diagnosis

Academic and Institutional Committees:

2002-2005	Center for Autism and Developmental Disabilities Research and
	Epidemiology (CADDRE), CDC, Co-investigator Laboratory
	committee
2007-Present	Associate Member, Children's Oncology Group, Section of
	Cytogenetics
2010-Present	American Board of Medical Genetics, Combined certification in
	cytogenetics and molecular genetic Diagnostics, Committee member
2010-2012	American Society of Clinical Pathology, Continuing education for
	Cytogenetic Technologists, Group leader

Major Academic and Clinical Teaching Responsibilities:

1999-2001	Human Genetics 150, Section leader for Human Genetics 150.
	University of Pennsylvania School of Medicine. David Gasser,
	Ph.D.
2000-Present	Medical Genetics I GC420, Arcadia College. Cytogenetics for
	Genetic Counseling graduate students
2005-2010	Core conferences Hahnemann University Hospital, Department of
	Pathology. Cytogenetics of constitutional and acquired
	abnormalities
2005-2010	Core conference Hahnemann University Hospital, Division of
	Oncology. Cytogenetic abnormalities in malignancy
2005-2010	Program for Integrated Learning. Drexel University College of
	Medicine. Cytogenetics of constitutional and acquired abnormalities
2005	"Chromosome abnormalities in autism; A prospective study of 108
	individuals with autism." Grand Rounds, St Christopher's Hospital
	for Children, Philadelphia, PA
2005	"Alagille Syndrome in the newborn period." Neonatology Grand
	Rounds, St Christopher's Hospital for Children, Philadelphia, PA
2008	"Sex reversal and sex chromosome abnormalities: Subtle
	presentation in three cases." Grand Rounds, St. Christopher's
	Hospital for Children, Philadelphia, PA
2012	"Measurement of Multiple Genes, SNP arrays and Massively
	parallel Sequencing" Disease Measurements 603. University of
	Pennsylvania School of Medicine. Steven Master and Bruce Sachais
	-

2012 Training Residents in Genomics

Lectures by Invitation (Last 5 years):

"Utility of Hematological Arrays in the Clinical Setting." Blue
Gnome Users Group, Philadelphia, PA
"Sex reversal due to a complex dup/del involving the DMRT1/2
genes." Genetics Grand Rounds, Children's Hospital of Philadelphia
"Trisomy 9 mosaicism." Genetics Grand Rounds, Children's
Hospital of Philadelphia
"X chromosome mosaicism: 3 cell lines in a dysmorphic child."
Genetics Grand Rounds, Children's Hospital of Philadelphia
"Worrisome findings in (cancer) cytogenetics." Genetics Grand
Rounds, Children's Hospital of Philadelphia
"Cytogenetic Testing and Microarray Comparative Genomic
Hybridization" Latest Advances in Molecular Pathology, Next
Generation Dx Summit, Washington DC
"Genetic Testing Beyond Chromosomes" Pediatrics and Obstetrics
Symposium, Vineland, NJ

Bibliography:

Research Publications, peer reviewed (print or other media):

- 1. Bruenn L A, Diamond M E, Dowhanick J J: Similarity between the picornavirus VP3 capsid polypeptide and the Saccharomyces cerevisiae virus capsid polypeptide. Nucleic acids research 17(18): 7487-93, Sep 1989.
- 2. Diamond M E, Dowhanick J J, Nemeroff M E, Pietras D F, Tu C L, Bruenn J A: Overlapping genes in a yeast double-stranded RNA virus. <u>Journal of virology</u> 63(9): 3983-90, Sep 1989.
- 3. Dowhanick J J, McBride A A, Howley P M: Suppression of cellular proliferation by the papillomavirus E2 protein. <u>Journal of virology</u> 69(12): 7791-9, Dec 1995.
- 4. Sakai H, Yasugi T, Benson J D, Dowhanick J J, Howley P M: Targeted mutagenesis of the human papillomavirus type 16 E2 transactivation domain reveals separable transcriptional activation and DNA replication functions. <u>Journal of virology</u> 70(3): 1602-11, Mar 1996.
- 5. Nishimura A, Ono T, Ishimoto A, Dowhanick J J, Frizzell M A, Howley P M, Sakai H: Mechanisms of human papillomavirus E2-mediated repression of viral oncogene expression and cervical cancer cell growth inhibition. <u>Journal of virology</u> 74(8): 3752-60, Apr 2000.

- 6. Warburton P E, Dolled M, Mahmood R, Alonso A, Li S, Naritomi K, Tohma T, Nagai T, Hasegawa T, Ohashi H, Govaerts L C, Eussen B H, Van Hemel J O, Lozzio C, Schwartz S, Dowhanick-Morrissette J J, Spinner N B, Rivera H, Crolla J A, Yu C, Warburton D: Molecular cytogenetic analysis of eight inversion duplications of human chromosome 13q that each contain a neocentromere. <u>American journal of human genetics</u> 66(6): 1794-806, Jun 2000.
- 7. Anbari K K, Ierardi-Curto L A, Silber J S, Asada N, Spinner N, Zackai E H, Belasco J, Morrissette J D, Dormans J P: Two primary osteosarcomas in a patient with Rothmund-Thomson syndrome. <u>Clinical orthopaedics and related research</u>(378), 213-23, Sep 2000.
- 8. Wells S I, Francis D A, Karpova A Y, Dowhanick J J, Benson J D, Howley P M: Papillomavirus E2 induces senescence in HPV-positive cells via pRB- and p21(CIP)-dependent pathways. The EMBO journal 19(21): 5762-71, Nov 2000.
- 9. Lee L, Dowhanick-Morrissette J, Katz A, Jukofsky L, Krantz I D: Chromosomal localization, genomic characterization, and mapping to the Noonan syndrome critical region of the human Deltex (DTX1) gene. <u>Human genetics</u> 107(6): 577-81, Dec 2000.
- 10. Morrissette J D, Celle L, Owens N L, Shields C L, Zackai E H, Spinner N B: Boy with bilateral retinoblastoma due to an unusual ring chromosome 13 with activation of a latent centromere. <u>American journal of medical genetics</u> 99(1): 21-8, Feb 2001.
- 11. Morrissette JD, Colliton RP, Spinner NB: Defective intracellular transport and processing of JAG1 missense mutations in Alagille syndrome. <u>Human molecular genetics</u> 10(4): 405-13, Feb 2001.
- 12. Lu F*, Morrissette JJD*, Spinner NB: Conditional JAG1 mutation shows the developing heart is more sensitive than developing liver to JAG1 dosage.

 <u>American Journal of Human Genetics</u> 72(4): 1065-70, Apr 2003. *these authors contributed equally to this work
- 13. Morrissette JJD, Laufer-Cahana A, Medne L, Russell KL, Venditti CP, Kline R, Zackai EH, Spinner NB: Patient with trisomy 9p and a hypoplastic left heart with a tricentric chromosome 9. <u>American journal of medical genetics. Part A</u> 123A(3): 279-84, Dec 2003.
- 14. Morrissette JJD, Medne L, Bentley T, Owens NL, Geiger E, Pipan M, Zackai EH, Shaikh T, Spinner NB: A patient with mosaic partial trisomy 18 resulting from dicentric chromosome breakage. <u>American journal of medical genetics. Part A</u> 137(2): 208-12, Aug 2005.

- 15. Warthen D M, Moore E C, Kamath B M, Morrissette J J D, Sanchez P, Piccoli D A, Krantz I D, Spinner N B: Jagged1 (JAG1) mutations in Alagille syndrome: increasing the mutation detection rate. <u>Human mutation</u> 27(5): 436-43, May 2006.
- 16. Morrissette JJD, Halligan GE, Punnett HH, McKenzie AS, Guerrero F, de Chadarévian JP: Down syndrome with low hypodiploidy in precursor B-cell acute lymphoblastic leukemia. <u>Cancer genetics and cytogenetics</u> 169(1): 58-61, Aug 2006.
- 17. Hall OR, Pascasio JM, Morrissette JJ, Newton C, Schwartz MZ, de Chadarévian JP: Study of an ovarian sclerosing stromal tumor presenting as vaginal bleeding in a 7-month-old. Pediatric and developmental pathology: the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society 11(4): 300-4, Jul-Aug 2008.
- 18. Healey K, Gray SL, Halligan GE, McKenzie AS, de Chadarévian JP, Morrissette JJD: Hyperdiploidy with trisomy 9 and deletion of the CDKN2A locus in T-cell acute lymphoblastic leukemia. <u>Cancer genetics and cytogenetics</u> 190(2): 121-4, Apr 2009.
- 19. Gray SL, de Chadarévian JP, Anderson CE, Shafer FE, Punnett HH, Morrissette JJD: Improvement of pancytopenia and thrombocytopenia with decreasing mosaicism for isochromosome Xp. <u>Pediatric blood & cancer</u> 52(5): 650-2, May 2009.
- 20. Descipio C, Morrissette JJD, Conlin LK, Clark D, Kaur M, Coplan J, Riethman H, Spinner NB, Krantz ID: Two siblings with alternate unbalanced recombinants derived from a large cryptic maternal pericentric inversion of chromosome 20. American journal of medical genetics. Part A 152A(2): 373-82, Feb 2010.
- 21. Bauer RC, Laney AO, Smith R, Gerfen J, Morrissette JJD, Woyciechowski S, Garbarini J, Loomes KM, Krantz ID, Urban Z, Gelb BD, Goldmuntz E, Spinner NB: Jagged1 (JAG1) mutations in patients with tetralogy of Fallot or pulmonic stenosis. Human mutation 31(5): 594-601, May 2010.
- 22. Descipio C, Morrissette JJD, Conlin LK, Clark D, Kaur M, Coplan J, Riethman H, Spinner NB, Krantz ID: Update on "two siblings with alternate unbalanced recombinants derived from a large cryptic maternal pericentric inversion of chromosome 20". <u>American journal of medical genetics</u>. Part A 152A(6): 1599, Jun 2010.
- 23. Chandra HS, Heisterkamp NC, Hungerford A, Morrissette JJ, Nowell PC, Rowley JD, Testa JR.: Philadelphia Chromosome Symposium: commemoration of the 50th anniversary of the discovery of the Ph chromosome. <u>Cancer Genet.</u> 204(4): 171-9, April 2011.

- 24. King RL, Naghashpour M, Watt CD, Morrissette JJD, and Bagg A: A comparative analysis of molecular genetic and conventional cytogenetic detection of diagnostically important translocations in over 400 cases of acute leukemia, highlighting the frequency of false negative conventional cytogenetics.

 <u>American Journal of Clinical Pathology</u> 135(6): 921-8, 2011.
- 25. de Chadarévian JP, Legido A, Halligan GE, Faerber EN, Piatt JH, Morrissette JD, Ara J, Grant ML, Katsetos CD.: Cerebellar Gliomatosis in a Toddler: Case Report of a Challenging Condition and Review of the Literature. J Child Neurol 2011.
- 26. Friedman B, Jambusaria A, Shinohara M, Elenitsas R, Frey N, Morrissette J, Rosenbach M. Isolated cutaneous extramedullary relapse of leukemia confirmed by fluorescent in situ hybridization analysis. J Am Acad Dermatol. 67:162-42012

Research Publications, peer-reviewed reviews:

- 1. Morrisette JJD, de Chadarevian J-P, Kolb EA: Familial Mosaic Monosomy 7
 Syndrome. GeneReviews at GeneTests: Medical Genetics Information Resource
 [database online]. Copyright, University of Washington, Seattle, 1997-2010.

 Available at http://www.genetests.org. Pagon RA, Bird TC, Dolan CR, Stephens K. (eds.). GeneReviews, July 2010.
- 2. Morrissette JJ, Bagg A.: Acute myeloid leukemia: conventional cytogenetics, FISH, and moleculocentric methodologies. <u>Clin Lab Med.</u> 2011.

Editorials, Reviews, Chapters, including participation in committee reports (print or other media):

- Bruenn JA, Nemeroff ME, Lee M, Pietras DF, Dowhanick JJ, Field LJ.: Structure, replication and transcription of killer virus dsRNAs. <u>Viruses of Fungi and Simple Eukaryotes</u>. M. Liebowitz and Y. Koltin Eds (eds.). Marcel Dekker, N.Y. 1988.
- Dowhanick JJ, Shen Y, Tu C-L, Tzeng TH, Bruenn JA.: Definition of functional domains and cis-acting sites in the yeast viral dsRNAs. <u>Viruses of Simple Eukaryotes, Molecular Genetics and Applications to Biotechnology and Medicine</u>. M. Liebowitz and Y. Koltin Eds. (eds.). U. Delaware Press, Newark DE. 1989.
- 3. Spinner NB, Morrissette JJD, Krantz IK.: Jagged genes. <u>Encyclopedia of Molecular</u> Medicine. John Wiley and Sons, Inc., Ed. (eds.). Thomas E. Creighton. 2001.

4. Morrissette JJD, Dunphy CH, Week K.: Techniques to Detect Chromosomal Translocations. <u>Molecular Pathology of Hematolymphoid diseases.</u> Cherie H Dunphy, Ed. (eds.). Springer, 2010.

Patents:

"Compositions and Methods for Treating Papillomavirus-Infected Cells." Peter M. Howley, Jennifer J. Dowhanick-Morrissette, John D. Benson, Hiroyuki Sakai. USA Patent Number 6432926, 2002.