

**Name:** Neil E. Lamb

## **CURRICULUM VITAE**

**Revised:** July 2008

**Name:** Neil Edward Lamb

**Office Address:** HudsonAlpha Institute for Biotechnology  
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**E-mail Address:** nlamb@hudsonalpha.org

**Birth Date and Place:** 4/19/70

**Citizenship:** USA

### **Current Title and Affiliation**

Director of Educational Outreach – HudsonAlpha Institute for Biotechnology, 2006-present

### **Focus**

Developing education-based programs with respect to a greater understanding of basic genetics, the identification, treatment and influence of genetic disease and the role of biotechnology in discovery, diagnosis and treatment. Workforce development for biotechnology across all skill and educational levels is an additional focus. Both formal and informal approaches are used to create genetically informed students, educators and members of the public. These include in-class inquiry-based activities, summer camp and intern programs, professional development workshops for educators and numerous public speaking engagements.

### **Academic appointment**

Adjunct Professor – Emory University School of Medicine – Department of Human Genetics, Atlanta GA

### **Education:**

1988-1992 B.S. Auburn University, Auburn, AL  
Magna Cum Laude, Phi Kappa Phi

1992-1997 Ph.D. Emory University, Atlanta GA Department of Genetics  
NIH Training Grant Fellow

*Dissertation:* Examination of Factors Involved in the Mechanisms of Nondisjunction and the Development of a Trisomic Phenotype

### **Postgraduate Training:**

Department of Genetics, School of Medicine, Emory University 1/97 – 5/97

### **Previous Employment and Appointments:**

Assistant Professor – Emory University School of Medicine - Department of Human Genetics, 1999-2006

*Research Focus* - Examining the various factors (chromosome homology, centromeric function and size, meiotic DNA binding proteins and homologous recombination)

**Name:** Neil E. Lamb

required for proper chromosome segregation during meiosis. Special emphasis is given to the origin of trisomy 21.

*Additional Appointments at Emory*

Director of Education, Department of Human Genetics, 2005-2006

Director, Center for Medical Genomics, 2001-2006

Chair, Department of Human Genetics Education Committee, 2005-2006

Co-Chair, Foundations of Medicine Curriculum Planning Committee, 2005-2006

Member, School of Medicine Education and Curriculum Committee, 2003-2006

Member, School of Medicine Full Admissions Committee, 2004-2006

Member, Steering Committee for Interdisciplinary Program in Bioethics, 2005-2006

**Editorial Boards**

2005 – 2007 Elsevier's Integrated (nine volume series)

**Manuscript Reviewer**

American Journal of Human Genetics

American Journal of Medical Genetics

Human Reproduction

**Honors and Awards**

NIH Training Grant Fellow – 1994-1996

American Society of Human Genetics – 1996 Outstanding Pre-doctoral Basic Research Award

Emory University School of Medicine – 2002 Dean's Golden Apple for Excellence in Teaching

National Council of Churches – 2005 Senior Sage – Human Biotechnology Policy

Development Committee

Emory Woodruff Health Science Center – 2005 Woodruff Leadership Academy Fellow

**Society Memberships**

American Society of Human Genetics, 1999 – 2008

Member, Education and Information Committee (2003-2005)

Chair, Education and Information Committee (2007)

National Science Teachers Association, 2003-

**Formal Teaching**

**Medical Student Teaching (Emory University School of Medicine):**

Small Group Facilitator - MEDI-545 - 2000-2006

Co-Director of MEDI-545 - 2000-2001

Course Director, MEDI 545, Human and Molecular Genetics – 2002-2006

Guest Lecturer – NSRG 450 – Human Genetics – Fall 2002

Guest Lecturer – MEDI 515, Medical Biochemistry – Fall 2003

Guest Lecturer – BAS501 – Biochemistry – Fall 2004, 2005

Short Course Director – Foundation Seminar for Physician Scholars (Department of Neonatology): Principles of Medical Genetics – Summer 2005

Guest Lecturer – NSRG 599 - Genetics for Advanced Practice Nursing – Spring 2006

**Additional Academic Teaching:**

Guest Lecturer – BIO470S – Genetics to Genomics (Emory College) –2003-2005

**Name:** Neil E. Lamb

Guest Lecturer – PC610 – Crisis Ministry (Emory School of Theology) 2004

Guest Lecturer – EPI 593M – Ethical, Legal, Social Issues in Responsible Clinical Research  
(Emory School of Public Health) –2004

Guest Lecturer – CS681 – Bioethics: technology, culture and the future – Asbury Theological  
Seminary, Asbury Kentucky –2004

Guest Lecturer – BIO 190S DNA and Forensics (Emory College) –2005

### **Seminar Invitations**

1. “Examining chromosome 21 segregation and meiotic recombination” Society for the Study of Human Reproduction Annual Meeting, Baltimore. Maryland. July 29, 2002
2. “Examining the relationship between meiotic recombination and chromosome 21 segregation” Association of Genetic Technologists Annual Meeting, Atlanta, GA. June 10, 2003.
3. “DNA – the blueprint of Life” Emory University Opening Convocation. August 26, 2003.
4. “Using disease scenarios and role playing to teach genetic principles” National Science Teacher Association Annual Meeting, Atlanta, GA. April 4, 2004.
5. “Examining the relationship between meiotic recombination and chromosome 21 segregation” Great Lakes Chromosome Conference, Keynote Speaker. Toronto, Canada. May 14, 2004.
6. “Complex Disorders: Why it will take all of us” and “Type II Diabetes: what the genes tell us” Genetics of Common Disorders: Implications for Curricula and Practice, Emory University School of Nursing. Atlanta, GA May 18, 2005.
7. “Principles of Modern Genetics: a one-week short course” Foundation Seminars for Physician Scholars. Division of Neonatology, Department of Pediatrics, Emory University School of Medicine. Atlanta GA. July 11-15, 2005.
8. “Examining the relationship between meiotic recombination, maternal age and chromosome 21 segregation” Neonatology Seminar Series, Division of Neonatology, Department of Pediatrics, Emory University School of Medicine. Atlanta GA. July 14, 2005.
9. “Genetics 101” American Association for Klinefelter Syndrome Information and Support: 6<sup>th</sup> National Conference, Atlanta, GA July 29, 2005.
10. “Genomics: The Genetic Revolution” Celebrating the Past, Advancing the Future Possibilities: Emory University Hospital 100<sup>th</sup> Celebration. Atlanta, GA. October 15, 2005.
11. “On the Horizon: Genetic Techniques and Diagnostic Tests Impacting the Newborn” Neonatology 2006, Atlanta GA. March 31, 2006.
12. “Maternal Age and Meiotic Recombination: pieces of the nondisjunction puzzle” Cutting Edge of Diagnosis and Treatment of Genetics and Chromosomal Disorders, Nagoya Japan, December 4, 2006
13. “Principles of Mendelian Genetics” and “Quantitative Genetics” American College of Medical Genetics 2007 Genetics Review Course, Atlanta, GA. June 8, 2007

### **Bibliography**

**Name:** Neil E. Lamb

**Published research articles:**

Weinshenker D, Wilson MM, Williams KM, Weiss JM, Lamb NE, Twigger SN (2005) A new method for identifying informative genetic markers in selectively bred rats. *Mammalian Genome* 15:784-791.

Sherman SL, Freeman SB, Allen EG, Lamb NE (2005) Risk factors for nondisjunction of trisomy 21. *Cytogenetic and Genome Research* 2005;111:273-280.

Lamb NE, Sherman SL, Hassold TJ (2005) Effect of meiotic recombination on the production of aneuploid gametes in humans *Cytogenetic and Genome Research* 2005;111:250-255.

Lamb NE, Yu K, Shaffer J, Feingold E, Sherman SL (2005) Association between Maternal Age and Meiotic Recombination. *American Journal of Human Genetics* 76:91-99.

Lamb N and Hassold T (2004) Nondisjunction: a view from ringside. *New England Journal of Medicine* 351:1931-1934.

Kong A, Barnard J, Gudbjartsson D, Thorleifsson G, Jonsdottir G, Sigurdardottir S, Richardson B, Jonsdottir J, Thorgeirsson T, Frigge M, Lamb N, Sherman S, Gulcher J and Stefansson K (2004) Recombination rate and reproductive success in humans. *Nature Genetics*, 36:1203-1206.

Lamb NE, (2004). Nondisjunction. In Encyclopedia of Genetics, Genomics, Proteomics and Bioinformatics. Dunn, Jorde, Little and Subramaniam, eds. Wiley and Sons (in press).

Zhao W, Hisamuddin IM, Nandan MO, Babbin BA, Lamb N, and Yang, VW (2004). Identification of Kruppel-like factor 4 as a potential tumor suppressor gene in colorectal cancer. *Oncogene* 23:395 - 402

Berend SA, Page SL, Atkinson W, McCaskill C, Lamb NE, Sherman SL, and Shaffer LG (2003), Obligate Short-Arm Exchange in De Novo Robertsonian Translocation Formation Influences Placement of Crossovers in Chromosome 21 Nondisjunction. *American Journal of Human Genetics* 72:488-95.

Li JM, Sherman SL, Lamb N, Zhao HY (2001). Multipoint mapping with trisomy data. *American Journal of Human Genetics* 69:1255-1265.

Lamb, N.E., Feingold, E., Savage-Austin, A., Avramopoulos, D., Freeman, S.B., Gu, Y., Hallberg, A., Hersey, J., Pettay, D., Saker, D., Shen, J., Taft, L., Mikkelsen, M., Hassold, T.J., Petersen, M., and Sherman, S.L. (1997). Characterization of susceptible chiasma configurations that increase the risk for maternal nondisjunction of chromosome 21. *Human Molecular Genetics*. 6:1391-1399.

Lamb, N.E., Feingold, E., and Sherman, S.L. (1997). Predicting meiotic exchange patterns from recombination data: an application to humans. *Genetics*. 146:1101-1117.

Lamb, N.E., Freeman, S.B., Savage-Austin, A., Avramopoulos, D., Gu, Y., Hallberg, A., Hersey, J., Pettay, D., May, K.M., Saker, D., Shen, J., Taft, L., Mikkelsen, M., Hassold, T.J., Petersen, M., and Sherman, S.L. (1996). Susceptible chiasmate configurations of chromosome 21 predispose to nondisjunction in both maternal meiosis I and meiosis II. *Nature Genetics* 14:400-405.

**Name:** Neil E. Lamb

Lamb, N.E., Feingold, E., and Sherman, S.L. (1996). Statistical models for trisomic phenotypes. *American Journal of Human Genetics*. 58(1):201-212.

Feingold, E., Lamb N.E., and Sherman, S.L. (1995). Methods for genetic linkage analysis using trisomies. *American Journal of Human Genetics*. 56(2):475-483.

Falk, C.T., Ashley, A., Lamb, N., and Sherman, S.L. (1995) Identification of susceptibility loci contributing to a complex disease using conventional segregation, linkage, and association methods. *Genetic Epidemiology*. 12:601-606.

### **Books and Book Chapters**

Lamb NE, Manson AL, Jones E, Morris A. Crash Course: Cell Biology and Genetics, 3<sup>rd</sup> Edition: Elsevier 2006

“Finding Human Disease Genes” In Recombinant DNA: Genes and Genomes – A Short Course, 3<sup>rd</sup> edition: Watson JD, Caudy AA, Myers RM, Witkowski J, W.H. Freeman 2007.