

## **CURRICULUM VITAE**

**Ron C. Michaelis, PhD**  
**Molecular Geneticist**  
**Behavioral Neuroscientist**

### **Contact Information**

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Western Carolina University  
Cullowhee, NC 28723

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### **Education and Training**

Vanderbilt University, Nashville, Tennessee  
September, 1978 - September, 1983  
Ph.D.in Psychology (Behavioral Neuroscience), Minor in Pharmacology  
National Institute of Mental Health Predoctoral Fellow

University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma  
September, 1983 - January, 1987  
Fellowship in Biological Psychology  
National Institute of Alcohol Abuse and Alcoholism Postdoctoral Fellow

Greenwood Genetic Center, Greenwood, South Carolina  
August, 1993 - August, 1995  
Fellowship in Clinical Molecular Genetics

Certified by the American Board of Medical Genetics--Clinical Molecular Geneticist  
September, 1996 - December, 2008

### **Professional Positions**

Postdoctoral Researcher--Behavioral Neuroscience  
University of Virginia Dept. of Psychology  
Charlottesville, VA  
January 1987 - April, 1988

Postdoctoral Researcher--Behavioral Neuroscience  
Bowman Gray School of Medicine Dept. of Physiology and Pharmacology  
Winston-Salem, NC  
April, 1988 - April, 1989  
Supervisor, Biochemical and Molecular Genetics Laboratory  
Bowman Gray School of Medicine, Winston-Salem, NC  
April 1989 - July 1993

Fellow, Clinical Molecular Genetics  
Greenwood Genetic Center, Greenwood, SC  
Aug 1993 - September 1996

Research Scientist  
J.C. Self Research Institute  
Greenwood Genetic Center, Greenwood, SC  
September 1996 - September 2003

Adjunct Research Assistant Professor  
Department of Genetics, Biochemistry and Life Science Studies  
Clemson University, Clemson, SC  
January 2002 - September 2003

Adjunct Professor  
Department of Biology  
Presbyterian College  
Clinton, SC  
September 1997 - September 2003

Teaching Associate  
Department of Chemistry and Physics  
Western Carolina University  
Cullowhee, NC  
August 2004 - Dec 2004

Instructor  
Department of Biology  
Western Carolina University  
Cullowhee, NC  
August 2004 - present

**Review Manuscripts/Textbook Chapters/Clinical Information For**  
American Journal of Medical Genetics  
Psychiatry Research  
Molecular Psychiatry  
European Journal of Human Genetics  
The Genetics Home Reference (National Institute of Health)  
W. H. Freeman Publishers

## **Teaching Experience**

Department of Biology, Western Carolina University, Cullowhee, NC  
Principles of Biology I (Cellular and Molecular Biology)  
Principles of Biology II (Comparative Zoology/Evolution of Systems)  
Forensic Biology  
Human Genetics  
Genetics And Evolution  
Senior Seminar  
Biochemistry  
Physiology for Health Science Majors

Center for Distance Learning and Continuing Education, Western Carolina University  
Human Genetics  
Chemistry In Everyday Life  
Human Biology: The Biology Of Childhood Learning Disorders

Department of Chemistry and Physics, Western Carolina University, Cullowhee, NC  
Human Gene Discovery

Department of Biology, Presbyterian College, Clinton, SC  
Human Genetics

Department of Psychology, Vanderbilt University, Nashville, TN  
Experimental Psychology (with lab)  
Animal Learning (with lab)  
Drugs and Behavior

Department of Psychology, University of Oklahoma, Norman, OK  
Graduate Seminar in Psychopharmacology/Substance Abuse

Department of Psychiatry and Behavioral Sciences, University of  
Oklahoma Health Sciences Center, Oklahoma City, OK  
Graduate Seminar in Alcohol Studies

Department of Psychology, University of Virginia, Charlottesville, VA  
Animal Behavior  
Drug Use, Misuse and Abuse

Department of Behavioral Sciences, High Point University, High Point, NC  
History and Systems of Psychology  
Human Growth and Development  
Theories of Learning  
Physiological Psychology  
Introduction to Experimental Research  
Research Methods  
Senior Seminar--Current Topics in Psychology

## **Publications**

### **Book**

A Litigator's Guide To DNA: From The Laboratory To The Courtroom. Ron C. Michaelis, Robert G. Flanders, Jr. and Paula Wulff. Published Feb 2008, Elsevier/Academic Press.

### **Book Chapter**

DNA In Forensic Investigations And Anthropological Research. In: DNA And Biotechnology, 3rd ed. Elsevier/Academic Press, currently in press, anticipated to be published in early 2009.

### **Miscellaneous Essays/Pieces For Nonscientific Audiences**

Two's Company and Three's A Crowd: Uniparental Disomy and Imprinted Genes (Essay on uniparental disomy and imprinted genes). In the Supplement to Biology: A Community Context (high school textbook)

No Fun At All: The Neurochemistry of Attention Deficit Disorder (Essay on the neurochemistry of ADD, and the effects of drugs which are commonly prescribed for ADD on reward pathways in the brain). In the Supplement to Biology: A Community Context (high school textbook)

Gale Encyclopedia Of Genetic Disorders: Entry on X-Linked Hydrocephalus

### **Peer-Reviewed Articles**

Hettinger JA, Liu X., Schwartz CE, Michaelis RC and Holden JJA. A DRD1 haplotype is associated with risk for autism spectrum disorders in male-only affected sib-pair families. *Am J Med Genet B (Neuropsychiatr Genet)*, 147B(5):628-36, 2008.

Botzenhart EM, Green A, Ilyina H, Konig R, Lowry RB, Lo IF, Shohat M, Burke L, McGaughan J, Chafai R, Pierquin G, Michaelis RC, Whiteford ML, Simola KO, Rosler B, Kohlhase J. SALL1 mutation analysis in Townes-Brocks syndrome: twelve novel mutations and expansion of the phenotype. *Hum Mutat*, 26(3):282, 2005.

Vermeulen SJ, Speleman F, Vanransbeeck L, Verspeet J, Menten B, Verschragen-Spae MR, Wilde PD, Messian L, Michaelis RC and Leroy JG. Familial pericentric inversion of chromosome 18: Behavioral abnormalities in patients heterozygous for either the dup(18p)/del(18q) or dup(18q)/del(18p) recombinant chromosome. *Eur J Hum Genet*, 13(1):52-58, 2005.

Jiang YH, Sahoo T, Michaelis RC, Bercovich D, Bressler J, Kashork CD, Liu Q, Shaffer LG, Schroer RJ, Stockton DW, Spielman RS, Stevenson RE and Beaudet AL. A mixed epigenetic/genetic model for oligogenic inheritance of autism with a limited role for UBE3A. *Am J Med Genet A*, 131(1):1-10, 2004.

Kohlhase J, Liebers M, Backe J, Baumann-Muller A, Bembea M, Destree A, Gattas M, Grussner S, Muller T, Mortier G, Skrypnik C, Yano S, Wirbelauer J and Michaelis RC. High incidence of the R276X SALL1 mutation in sporadic but not familial Townes-Brocks syndrome and report of the first familial case. *J Med Genet*, 40(11):127, 2003.

Lobo-Menendez F, Sossey-Alaoui K, Bell JM, Copeland-Yates SA, Plank SM, Sanford SO, Skinner C, Simensen RJ, Schroer RJ and Michaelis RC. Absence of MECP2 mutations in patients from the South Carolina Autism Project. *Am J Med Genet*, 117B(1):97-101, 2003.

Collins JS, Schroer RJ, Bird J and Michaelis RC. The HOXA1 A218G Polymorphism and Autism: Lack of association in white and black patients from the South Carolina Autism Project. *J Autism Devel Dis*, 33(3):343-348,2003.

Velagaleti GVN, Jalal SM, Michaelis RC, Rowe TF, Nichols JR and Lockhart LH. Molecular cytogenetic characterization of a de novo unbalanced translocation leading to trisomy 17q25---> qter and monosomy 18p11.3---> pter in a girl with dysmorphic features. *Clinical Dysmorph* 12:29-33, 2003.

Parisi MA, Kapur RP, Neilson I, Hofstra RMW, Holloway LW, Michaelis RC and Leppig KA. Hydrocephalus and intestinal aganglionosis: Is L1CAM a modifier gene in Hirschsprung disease? *Am J Med Genet* 108(1): 51-56, 2002.

Moya GE, Michaelis RC, Holloway LW and Sanchez JM. Prenatal diagnosis of L1 cell adhesion molecule (L1CAM) mutations: Capabilities and limitations. *Fet Diagn Ther* 17: 115-119, 2002.

Rosenberg MJ, Killoran C, Dziadzio L, Chang S, Stone DL, Meck J, Aughton D, Bird LM, Bodurtha J, Cassidy SB, Graham JM Jr., Grix A, Guttmacher AE, Hudgins L, Kozma C, Michaelis RC, Pauli R, Peters KF, Rosenbaum KN, Tiffit CJ, Wargowski D, Williams MS, Biesecker LG. Scanning for telomeric deletions and duplications and uniparental disomy using genetic markers in 120 children with malformations. *Human Genetics* 109(3): 311-8, 2001.

Plank SM, Copeland-Yates SA, Sossey-Alaoui K, Bell JM, Schroer RJ, Skinner C, and Michaelis, RC. Lack of association of the (AAAT)<sub>6</sub> allele of the GXAlu tetranucleotide repeat in intron 27b of the NF1 gene with autism. *Am J Med Genet* 105:404-405, 2001.

Nurmi EL, Bradford Y, Chen Y, Hall J, Arnone B, Gardiner MB, Hutcheson HB, Gilbert JR, Pericak-Vance MA, Copeland-Yates SA, Michaelis RC, Wassink TH, Santangelo SL, Sheffield VC, Piven J, Folstein SE, Haines JL and Sutcliffe JS. Linkage disequilibrium at the Angelman syndrome gene UBE3A in autism families. *Genomics* 77:105-113, 2001.

Jarrett KL, Michaelis RC, Phelan MC, Vincent VA and Best RG. Microsatellite analysis reveals a high incidence of maternal cell contamination in 46,XX products of conception consisting of villi or a combination of villi and membranous material. *Am J Obstet Gynecol* 185(1):198-203, 2001.

Bassett LL, Michaelis RC, Geiger MH, Tarleton J, Moore CL, Knops JF, Carroll AJ and Proud VK. Prader-Willi syndrome due to maternal uniparental disomy of chromosome 15 in a boy with a balanced 3;21 translocation. *Am J Med Genet* 100:85-86, 2001.

Copeland-Yates S and Michaelis RC. A novel intronic polymorphism (intron 2 +130 (CT)<sub>n</sub>) in the human homeobox gene HOXB3. *Hum Mutat* 17(2):156-157, 2001.

Phelan MC, Curtis Rogers R, Michaelis RC, Moore CL, Blackburn W. Prenatal diagnosis of mosaicism for triploidy and trisomy 13. *Prenat Diagn* Jun;21(6):457-60, 2001.

Michaelis RC, Copeland-Yates SA, Sossey-Alaoui K, Skinner C, Friez MJ, Longshore JW, Simenson, RJ, Schroer RJ, Stevenson RE. The HOPA gene dodecamer duplication is not a significant etiological factor in autism. *J Autism Devel Dis* 30:355-358, 2000.

Glenn CC, Deng G, Michaelis RC, Tarleton J, Phelan MC, Surh LS, Yang TP and Driscoll DJ. DNA methylation analysis with respect to prenatal diagnosis of the Angelman and Prader-Willi syndromes and imprinting. *Prenat Diagn* 20(4):300-306, 2000.

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Graf WD, Born DE, Shaw DW, Thomas JR, Holloway LW, Michaelis RC. Diffusion-weighted magnetic resonance imaging in boys with Neural cell adhesion molecule L1 mutations and congenital hydrocephalus. *Ann Neurol* 47:113-7, 2000.

Kaiser-Rogers KA, Rao KW, Michaelis RC, Lese CM, Powell CM. Usefulness and limitations of FISH to characterize partially cryptic complex chromosome rearrangements. *Am J Med Genet* 95(1):28-35, 2000.

Graf WD, Born DE, Shaw DW, Thomas JR, Holloway LW, Michaelis RC. Brainstem diffusion-weighted MRI in boys with L1CAM mutations. *Eur J Pediatr Surg* 9(suppl 1):41-42, 1999.

Powell CM and Michaelis RC. Syndrome of the month: Townes Brocks syndrome. *J Med Genet* 36:89-93, 1999.

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Seeler RA, Vnencak-Jones CL, Bassett LM, Gilbert JB, Michaelis RC. Severe haemophilia A in a female: a compound heterozygote with nonrandom X-inactivation. *Haemophilia* 5(6):445-449, 1999.

Schroer RJ, Phelan MC, Michaelis RC, Crawford EC, Skinner SA, Cuccaro M, Simenson RJ., Bishop J, Skinner C, Fender D, Stevenson RE. Autism and maternally derived aberrations of chromosome 15. *Am J Med Genet* 76:327-336, 1998.

Michaelis RC, Du Y-Z, Schwartz CE. The site of a missense mutation in the extracellular Ig and FN domains of L1CAM influences infant mortality and the severity of X-linked hydrocephalus. *J Med Genet* 35:901-904, 1998.

Robinson WP, Kuchinka BD, Bernasconi F, Petersen MB, Schulze A, Brondum-Nielsen K, Christian SL, Ledbetter DH, Schinzel AA, Horsthemke B, Schuffenhauer S, Michaelis RC, Langlois S, Hassold TJ. Maternal meiosis I nondisjunction of chromosome 15: Dependence of the maternal age effect on level of recombination. *Hum Molec Genet* 7:1011, 1998.

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Kulharaya AS, Michaelis RC, Norris KS, Taylor HA, Garcia-Heras J. Constitutional del(19)(q12q13.1) in a three-year old girl with severe phenotypic abnormalities affecting multiple organ systems. *Am J Med Genet* 77:391, 1998.

Minassian BA, Otsubo H, DeLorey TM, Olsen RW, Bryant AE, Michaelis RC, Barr C, et al. Continuous paroxysmal epileptiform discharges during sleep in a patient with deletion of the chromosome 15 GABA-A receptor subunit gene cluster. *Epilepsia* 38 Supp 8:127, 1997.

Michaelis RC, Skinner SA, Deason R, Skinner C, Moore CL, Phelan MC: Interstitial deletion of chromosome 20p: New candidate region for autism and Hirschprung disease? *Am J Med Genet* 71:298, 1997.

Trent RJ, Sheffield L, Deng Z-M, Kim WS, Nassif NT, Ryce C, Woods G, Michaelis RC, Tarleton J, Smith A. The elusive Angelman syndrome critical region. *J Med Genet* 34:714, 1997.

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Willi SM, Hill JB, Phelan MC, Michaelis RC, Holden KR. Identification of a deletion in the long arm of chromosome 18 in a child with serum carnosinase deficiency. *Pediatr Res* 41:210-213, 1997.

Rajangam S, Michaelis RC, Velagaleti GV, Lincoln S, Hegde S, Lewin S, Tarleton J, Thomas IM, Tharapel AT. Down syndrome with biparental inheritance of der(14;21)(q10;q10) and maternally derived trisomy 21: Confirmation by microsatellite polymorphism analysis. *Am J Med Genet* 70:43-47, 1997.

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Holloway, F.A., Michaelis, R.C., and Huerta, P.L. Caffeine-phenylethamine combinations mimic the amphetamine discriminative cue. *Life Sciences*, 36: 723-730, 1985.

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Michaelis, R.C., Caul, W.F., Schmidt, D.E., and Haenlein, M. Altered brain-behavior correlations following prenatal ethanol exposure. *Federation Proceedings* 43(3): 580, 1984.

Michaelis, R.C., Holohean, A.M., Hunter, G.A., and Holloway, F.A. Endogenous adenosine-receptive systems do not mediate the discriminative stimulus properties of ethanol. *Alcohol and Drug Research* 7: 175-185, 1987.

Michaelis, R.C., Holloway, F.A., Bird, D.C., and Huerta, P.L. Interactions between stimulants: Effects on DRL performance and lethality in rats. *Pharmacology, Biochemistry, and Behavior* 27: 299-306, 1987.

Michaelis, R.C., Holohean, A.M., Criado, J.R., Harland, R.D., Hunter, G.A., and Holloway, F.A. The chlordiazepoxide versus pentylentetrazol discrimination: Characterization of drug interactions and homeostatic responses to drug challenges. *Psychopharmacology* 96(1): 15-20, 1988.

Holloway, F.A., Bird, D.C., Holloway, J.A., and Michaelis, R.C. Behavioral factors in the development of tolerance to ethanol's effects. *Pharmacology, Biochemistry, and Behavior* 29(1): 105-113, 1988.

Harland, R.D., Gauvin, D.V., Michaelis, R.C., Carney, J.M., Seale, T. and Holloway, F.A. Behavioral interaction between cocaine and caffeine--A drug discrimination analysis in rats. *Pharmacology Biochemistry and Behavior* 32(4): 1017-1023, 1989.

Gauvin, D.V., Harland, R.D., Michaelis, R.C. and Holloway, F.A. Caffeine-phenylethylamine combinations mimic the cocaine discriminative cue. *Life Sciences* 44(1): 67-73, 1989.

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Deadwyler, S.A., Heyser, C.J., Michaelis, R.C., and Hampson, R.E. The effects of delta-9-THC on mechanisms of learning and memory. *National Institute on Drug Abuse Monograph* 97: 79-93, 1990.

Deadwyler, S.A., Heyser, C.J., Michaelis, R.C., Hampson, R.E. and Breese, C.R. Behavioral and electrophysiological effects of delta-9-THC in rats. *National Institute on Drug Abuse Monograph* 90: 223-233, 1988.

Holloway, F.A., King, D.A., Michaelis, R.C., Harland R.D. and Bird, D.C. Tolerance to ethanol's disruptive effects on operant behavior in rats. *Psychopharmacology* 99(4): 479-485, 1989.

Holloway, F.A., Michaelis, R.C., Harland, R.D., Criado, J.R. and Gauvin, D.V. Tolerance to ethanol's effects on operant performance in rats: Role of number and pattern of intoxicated practice opportunities. *Psychopharmacology* 99(4): 490-495, 1989.

Gomez, J. S. and Michaelis, R.C. An assessment of burnout in human service providers in Northwestern North Carolina. *Journal of Rehabilitation* 61(1): 23-26, 1995.