CURRICULUM VITAE

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Present Position: Professor, Department of Medical Genetics, University of Alberta

Education:

B.Sc. (Hons) (SSP), Theoretical Physics 1987
Queen's University, Kingston, Ontario, Canada

Ph.D., Molecular and Medical Genetics 1992
University of Toronto, Toronto, Ontario, Canada

Professional Positions:

Member	CIHR Genetics Operating Grants Committee	11/04, 11/05, 07/06 to 06/08, 10/17
Chair	CIHR Genetics Operating Grants Committee	07/08 to 06/11, 11/13
Member	Scientific Advisory Board, Prader-Willi Syndrome Association (USA)	11/05-present
Member	Scientific Board of Directors, Foundation for Prader-Willi Research (FPWR, USA)	01/08-present
Member	Scientific Advisor to the Board, FPWR-Canada	05/15-present
Member	FPWR Preclinical Animal Models Network	03/16-present
Member	FPWR Cellular Network Program	08/17-present
Member	FPWR Schaaf-Yang Syndrome (SYS) / MAGEL2 Advisory Group	08/17-present

University Committees:

07/03-06/08	Member, Steering and Studentship Committees, CIHR Strategic Training program in Maternal, Fetal and Newborn Health
10/03-12/04	Member, Search and Selection Committee, Chair, Medical Genetics
04/05-06/10	Member and *ad hoc* Chair, AHFMR Internal Allocations Committee
09/10-09/13	Academic Lead, Research Education, Women & Children's Health Research Institute
07/15-06/2020	President's Review Committee, Univ. of Alberta

Publications in refereed journals (my trainees are underlined):

1. K. Lake and **R. Wevrick** (1985) Evolution of bubbles in vacuum. *Can. J. Physics* **64**, 165-173.
2. **R. Wevrick** and H.F. Willard (1989) Long-range organization of tandem arrays of alpha satellite arrays at the centromeres of human chromosomes: high frequency array length polymorphism and meiotic stability. *Proc. Natl. Acad. Sci. U.S.A.* **86**, 9394-9398.
3. **R. Wevrick**, W.C. Earnshaw, P.N. Howard-Peebles and H.F. Willard (1990) Partial deletion of alpha satellite DNA associated with reduced amounts of CENP-B in a mitotically stable human chromosome rearrangement. *Molecular Cellular Biology* **10**, 6374-6380.
4. **R. Wevrick** and H.F. Willard (1991) Physical map of the centromeric region of human chromosome 7: relationship between two distinct alpha satellite arrays. *Nucleic Acids Res.* **19**, 2295-2301.
5. **R. Wevrick**, V.P. Willard and H.F. Willard (1992) Structure of the DNA near long tandem arrays of alpha satellite DNA at the centromere of human chromosome 7. *Genomics* **14**, 912-923.

6. **R. Wevrick**, C.A. Clarke and M. Buchwald (1993) Cloning and analysis of the murine Fanconi anemia group C cDNA. *Human Molec Genetics* **2,** 655-662.
7. **R. Wevrick**, J.E. Barker, J.H. Nadeau, C. Szpirer and M. Buchwald (1993) Mapping of the murine *Facc* gene and assessment of flexed-tail as a candidate mouse homolog of Fanconi anemia group C. *Mamm. Genome* **4**, 440-444.
8. **R. Wevrick**, J.A. Kerns and U. Francke (1994) Identification of a novel paternally expressed gene in the Prader-Willi syndrome region. *Human Molec Genetics*, **3**, 1877-1882.
9. H. Joenje, H. Youssoufian, F.A.E. Kruyt, C.C. dos Santos, **R. Wevrick** and M. Buchwald (1995) Expression of the Fanconi anemia gene *FAC* in human cell lines: lack of effect on oxygen tension. *Blood Cells, Molecules and Diseases*, **21**, 182-191.
10. **R. Wevrick** and U. Francke (1996) Diagnostic test for the Prader-Willi Syndrome by SNRPN expression in blood. *The Lancet* **348**, 1068-1069.
11. **R. Wevrick** and U. Francke (1997) An imprinted mouse transcript homologous to the human Imprinted in Prader-Willi (*IPW*) gene. *Human Molec. Genetics* **6**, 325-332.
12. S. Lee and **R. Wevrick** (1997) "Glow in the Dark" crayons as inexpensive autoradiography markers. *Technical Tips Online* (http://www.elsevier.com/locate/tto) T01055.
13. H.R. MacDonald and **R. Wevrick** (1997) The necdin gene is deleted in Prader-Willi syndrome and is imprinted in human and mouse. *Human Molec. Genetics* **6**, 1873-1878.
14. T. Yang, T.E. Adamson, S. Leff, **R. Wevrick**, U. Francke, N.A. Jenkins, N.G. Copeland and C.I. Brannan (1998) A mouse model for Prader-Willi syndrome imprinting center mutations. *Nature Genetics* **19**, 25-31.
15. M. Gerard, L. Hernandez, **R. Wevrick** and C.L. Stewart (1999) Disruption of the mouse *Necdin* gene results in early postnatal lethality: a model for neonatal distress in Prader-Willi syndrome. *Nature Genetics*, **23**, 199-202.
16. C.C. Morton, S.L. Christian, T.A. Donlon, D.J. Driscoll, J. Fink, J.M. Gabriel, G. Gotway, J.M. Greally, M.P. Hitchins, H.C. Howard, Y. Ji, S. Leonard, T. Lerner, E. Magenis, S. Malcolm, T. Ohta, S. Rainier, M. Rees, B. Riley, W.P. Robinson, S. Saitoh, R. Schultz, S. Sellm, J.D. Sharp, C. Talbot, R. Trent, **R. Wevrick,** R.D. Nicholls (1999) Report of the fourth international workshop on human chromosome 15 mapping 1997. *Cytogenet. Cell Genetics* **84**, 11-21.
17. S. Lee and **R. Wevrick** (2000) Identification of novel imprinted transcripts in the Prader-Willi/Angelman syndrome deletion region: further evidence for regional imprinting control. *Am. J. Human Genetics* 66: 848-858.
18. S. Lee, S. Kozlov, L. Hernandez, S.J. Chamberlain, C.I. Brannan, C.L. Stewart and **R. Wevrick** (2000) Expression and imprinting of *MAGEL2* suggest a role in Prader-Willi Syndrome and the homologous murine imprinting phenotype. *Human Molec Genetics* **9**, 1813-1819.
19. M. Kelly, A. J. Edgar and **R. Wevrick** (2001) Analysis of *DEXI/Dexi* refines the organization of the mouse 7C and human 15q11-q13 imprinting clusters. *Cytogenet. Cell Genetics* **92**, 149-152.
20. M.L. Hanel and **R. Wevrick** (2001) Establishment and maintenance of DNA methylation patterns in mouse *Ndn*: implications for maintenance of imprinting in target genes of the imprinting center. *Molecular Cellular Biology* **21**, 2384-2392.
21. T.K. Chibuk, J.M. Bischof and **R. Wevrick** (2001) A necdin-like gene in the chromosome 15 autism susceptibility region: expression, imprinting, and mapping of the human and mouse orthologues. *BMC Genetics* **2**, 22.
22. J. Ren*, S. Lee*, S. Pagliardini, M. Gérard, C.L. Stewart, J.J. Greer and **R. Wevrick** (2003) Absence of *Ndn*, encoding the Prader-Willi syndrome deleted gene necdin, results in congenital deficiency of central respiratory drive in neonatal mice. *J. Neuroscience* **23**, 1569-1573 (*, joint first authors)
23. S. Lee, C.L. Walker and **R. Wevrick** (2003) Prader-Willi syndrome transcripts are expressed in phenotypically significant regions of the developing mouse brain, *Gene Expr. Patterns* **3**, 599-609.

24. J.M. Bischof, M. Ekker and **R. Wevrick** (2003) A MAGE/NDN-like gene in zebrafish. *Developmental Dynamics*, **228:**475-479.
25. J.C.Y. Lau, M.L. Hanel and **R. Wevrick** (2004) Tissue-specific and imprinted epigenetic modifications of the human *NDN* gene. *Nucleic Acids Res.*, **32**, 3376-3382.
26. M.L. Hanel, J.C.Y. Lau, I. Paradis, R. Drouin and **R. Wevrick** (2005) Chromatin modification of the human imprinted *NDN* (necdin) gene detected by *in vivo* footprinting. *J. Cellular Biochem*. **94**, 1046-1057.
27. S. Lee, C. Walker, B. Karten, S. L. Kuny, A.A. Tennese, M.A. O'Neill and **R. Wevrick** (2005) Essential role for the Prader-Willi syndrome protein necdin in axonal outgrowth. *Human Molec. Genetics* **14**, 627-637.
28. S. Pagliardini, J. Ren, **R. Wevrick** and J.J. Greer (2005) Developmental abnormalities of neuronal structure and function in prenatal mice lacking the Prader-Willi syndrome gene necdin. *Am. J. Pathology*, **167**, 175-191
29. J.M. Bischof and **R. Wevrick** (2005) Genome-wide analysis of gene transcription in the hypothalamus. *Physiological Genomics*, **22**,191-196.
30. M.A. O'Neill, I.S. Farooqi and **R. Wevrick** (2005) Evaluation of Prader-Willi syndrome gene *MAGEL2* in severe childhood-onset obesity. *Obesity Research*, **13**, 1841-1842.
31. S. Koslov, J. W. Bogenpohl, M. P. Howell, **R. Wevrick**, S. Panda, J.B. Hogenesch, L. J. Muglia, R. Van Gelder, E. D. Herzog, C. L. Stewart (2007) The imprinted gene *Magel2* regulates normal circadian output. *Nature Genetics* **39**, 1266 - 1272. Subject of a "News and Views" in the same issue and a "Research Highlights" in Nature Reviews Neuroscience.
32. J. M. Bischof, C. L. Stewart and **R. Wevrick** (2007) Inactivation of the mouse Magel2 gene results in growth abnormalities similar to Prader-Willi Syndrome. *Human Molec. Genetics* **16**: 2713-2719.
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35. N.L.G. Miller, **R. Wevrick**, P.L. Mellon (2009) Necdin, a Prader-Willi syndrome candidate gene, regulates the development of gonadotropin-releasing hormone neurons. *Human Molec. Genetics* **18**:248-260*. Evaluated by Faculty of 1000*
36. R. E. Mercer and **R. Wevrick** (2009) Loss of *Magel2*, a candidate gene for features of Prader-Willi syndrome, impairs reproductive function in mice. *PLoS ONE 4(1): e4291.*
37. R.E. Mercer, E. M. Kwolek, J.M. Bischof, M. van Eede, R. M. Henkelman and **R. Wevrick** (2009) Regionally reduced brain volume, altered serotonin neurochemistry, and abnormal behavior in mice null for the circadian rhythm output gene *Magel2*. *Am. J. Med. Genetics* B **150B**: 1085–1099.
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41. R.E. Mercer and **R. Wevrick** (2012) Energy homeostasis in Prader-Willi Syndrome: how clinical research informs studies of animal models of genetic obesity. *Am. J. Med. Genetics A*, 158A: 966-9668. (reviewed commentary).

42. J.R. Bush and **R. Wevrick** (2012) Loss of the Prader-Willi obesity syndrome protein necdin promotes adipogenesis. *Gene*, **497**, 45-51.
43. T. Asai, Y. Liu, S. Di Giandomenico, N. Bae, D. Ndiaye-Lobry, A. Deblasio, S. Menendez, Y. Antipin, B. Reva, **R. Wevrick** and S. D. Nimer (2012) Necdin, a p53 target gene, regulates the quiescence and response to genotoxic stress of hematopoietic stem/progenitor cells. *Blood*, **120**:1601-1612.
44. J. Borovac, R. S. Barker, J. Rievaj, A. Rassmusen, W. Pan, **R. Wevrick** and R. T. Alexander (2012) Claudin-4 forms a paracellular barrier, revealing the interdependence of claudin expression in the loose epithelial cell culture model, Opossum Kidney Cells. *American Journal of Physiology-Cell Physiology*, **303**: C1278-1291.
45. R.E. Mercer, S.D. Michaelson, M.J.S. Chee, T.A. Atallah, **R. Wevrick*** and W.F. Colmers* (2013) Magel2 Is Required for Leptin-Mediated Depolarization of POMC Neurons in the Hypothalamic Arcuate Nucleus in Mice. *PLoS Genetics,* **9:** e1003207 (*joint senior authors).
46. X. Li, R. Zhuo, S. Tiong, F. Di Cara, K. King-Jones, S. C. Hughes, S. D. Campbell, **R. Wevrick** (2013) The Smc5/Smc6/MAGE complex confers resistance to caffeine and genotoxic stress in *Drosophila melanogaster*. *PLoS One*, 8(3): e59866.
47. A. Rieusset, F. Schaller, U. Unmehopa, V. Matarazzo, F. Watrin, M. Linke, B. Georges, J. Bischof, F. Dijkstra, M. Bloemsma, S. Corby, F.J. Michel, **R. Wevrick**, U. Zechner, D. Swaab, K. Dudley, L. Bezin and F. Muscatelli (2013) Stochastic loss of silencing of the imprinted Ndn/NDN allele, in a mouse model and humans with Prader-Willi syndrome, has functional consequences. *PLoS Genetics,* 9(9): e1003752.
48. X. Li, S. C. Hughes, **R. Wevrick** (2015) Evaluation of melanoma antigen gene (*MAGE*) expression in human cancers using The Cancer Genome Atlas. *Cancer Genetics*, 208:25-34.
49. I. Pravdivyi, K. Ballanyi, W.F. Colmers, **R. Wevrick** (2015) Progressive postnatal decline in leptin sensitivity of arcuate hypothalamic neurons in the Magel2-null mouse model of Prader-Willi Syndrome. *Hum. Molec. Genet.* **24,** 4276-4283. PMID: 25926624
50. D.M. Arble, J.W. Pressler, J. Sorrell, **R. Wevrick**, D.A. Sandoval (2016) Sleeve gastrectomy leads to weight loss in the Magel2 knockout mouse. *Surgery for Obesity and Related Diseases,* S1550-7289, 30054-30055 PMID: 27396546.
51. J.M. Bischof, L.H.T. Van der Ploeg, W.F. Colmers and **R. Wevrick** (2016) Magel2-null mice are hyper-responsive to setmelanotide, a melanocortin 4 receptor agonist. *Br. J. Pharm* 173:2614-2621. PMID: 27339818.
52. C. Luck, M.H. Vitaterna, and **R. Wevrick** (2016) Dopamine pathway imbalance in mice lacking Magel2, a Prader-Willi syndrome candidate gene. *Behavioral Neuroscience* 130:448-59 PMID: 27254754.
53. A.A. Kamaludin, C. Smolarchuk, J. M. Bischof, R. Eggert, J.J. Greer, J. Ren, J.J. Lee, T. Yokota, F.B. Berry, and **R. Wevrick** (2017) Muscle dysfunction caused by loss of *Magel2* in a mouse model of Prader-Willi and Schaaf-Yang syndromes. *Hum. Mol. Genet.* 25: 3798-3809. PMID: 27436578
54. I. Knani, B. J. Earley, S. Udi, A. Nemirovskai, R. Hadar, R. Cinar, H. J Hirsch, Y. Pollak, I. Gross, T. Eldar-Geva, D. P. Reyes-Capo, J. C. Han, A. M. Haqq, V. Gross-Tsur, **R. Wevrick**, and J. Tam. (2016) Targeting the Endocannabinoid/CB1 Receptor System for Treating Obesity in Prader-Willi Syndrome. *Molecular Metabolism*, 5: 1187–1199. PMID: 27900261
55. T. M. Wijesuriya, L. De Ceuninck, D. Masschaele, M. R. Sanderson, K. V. Carias, J. Tavernier, and **R. Wevrick** (2017). The Prader-Willi syndrome proteins MAGEL2 and necdin regulate leptin receptor cell surface abundance through ubiquitination pathways. *Hum. Mol. Genet.,* 26*,* 4215–4230. PMID: 28973533
56. H.D. Cortes and **R. Wevrick** (2018) Genetic analysis of very obese children with autism spectrum disorder. *Molecular Genetics and Genomics.* 293, 725-736 PMID: 29327328

57. J. M. Bischof and **R. Wevrick** (2018). Chronic diazoxide treatment decreases fat mass and improves endurance capacity in an obese mouse model of Prader-Willi syndrome. *Molecular Genetics and Metabolism* 123, 511-517. PMID: 29506955
58. SF Barclay, CM Rand, L Nguyen, RJA Wilson, **R Wevrick**, WT Gibson, NT Bech-Hansen, DE Weese-Mayer. (2018) ROHHAD and Prader-Willi Syndrome (PWS): Clinical and Genetic Comparison. *Orphanet Journal of Rare Diseases*. 13:124. PMID: 30029683
59. K.V. Carias and **R. Wevrick** (2019) Clinical and genetic analysis of children with a dual diagnosis of Tourette syndrome and autism spectrum disorder. *Journal of Psychiatric Research* 111:145-153. PMID: 30771620.
60. K.V. Carias, M. Zoeteman, A. Seewald, M.R. Sanderson, J.M. Bischof, and **R. Wevrick** (2020) A MAGEL2-deubiquitinase complex regulates the ubiquitination of circadian rhythm protein CRY1. *PLoS One* 15(4):e0230874. PMID: 32315313.

Book Chapters, Reviews, Reports and Commentaries:

1. H.F. Willard, **R. Wevrick**, Warburton PE. (1989) Human centromere structure: organization and potential role of alpha satellite DNA. Prog Clin Biol Res. 318:9-18.
2. PE Warburton, **R. Wevrick**, Mahtani MM, Willard HF. (1992) Pulsed-field and two-dimensional gel electrophoresis of long arrays of tandemly repeated DNA: analysis of human centromeric alpha satellite. Methods Mol Biol. 12:299-317.
3. **R. Wevrick** and Buchwald M. Mammalian DNA-repair genes. (1993) Curr Opin Genet Dev. 3:470-4.
4. **R. Wevrick**, Kerns JA, Francke U. (1996) The IPW gene is imprinted and is not expressed in the Prader-Willi syndrome. Acta Genet Med Gemellol (Roma).;45:191-7.
5. W.P. Robinson, B. Horsthemke, S. Leonard, S. Malcolm, C. Morton, R.D. Nicholls, R. Ritchie, P. Rogan, R. Schultz, S. Schwartz, J. Sharp, R. Trent, **R. Wevrick**, M. Williamson and J.H.M. Knoll (1997) Report of the third international chromosome 15 mapping workshop, Vancouver Canada 1996. *Cytogenet. Cell Genetics* **76**, 1-13.
6. Lee C, **R. Wevrick**, Fisher RB, Ferguson-Smith MA, Lin CC. (1997) Human centromeric DNAs. Hum Genet.;100:291-304.
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8. M.L. Hanel and **R. Wevrick** (2001) The role of genomic imprinting in human developmental disorders: lessons from Prader-Willi syndrome. *Clin. Genetics* **59**:156-164.
9. H. McDermid and **R. Wevrick** (2005). Inv dup(15) and inv dup(22). In "Genomic Disorders: The Genomic Basis of Disease" Humana Press Inc.
10. J.J. Greer and **R. Wevrick** (2007) Respiratory control abnormalities in *necdin*-null mice: implications for pathogenesis of Prader-Willi syndrome. In *"Genetic basis for respiratory control disorders"* Ed. Glaude Gaultier. Springer, New York. Ch. 15 pp 259-270.
11. S. Pagliardini, J. Ren, **R. Wevrick** and J.J. Greer (2008) Neurodevelopmental abnormalities in the brainstem of prenatal mice lacking the Prader-Willi syndrome gene necdin. In *"Advances in Experimental Biology and Medicine"*, Integration In Respiratory Control: From Genes To Systems Book Series: Advances In Experimental Medicine And Biology **605,** pp 139-143 Springer Press.
12. **R. Wevrick** (2008) Prader-Willi Syndrome. In *"Genetics of Obesity Syndromes"* Oxford University Press, Book Series: Oxford Monographs on Medical Genetics. P. R. Beales, I.S. Farooqi, S. O'Rahilly, eds.
13. S.V. Weselake and **R. Wevrick** (2012) Co-morbidity of complex genetic disorders and hypersomnias of central origin: lessons from the underlying neurobiology of wake and sleep. *Clinical Genetics*, **82**: 379-387.

14. **R. Wevrick** (2012) 2012 Report from the PWS Animal Models Working Group. Available at *www.fpwr.org*.
15. **R. Wevrick** (2012) Prader-Willi Syndrome: A binge-eating disorder. One of three runner-up prizes awarded in InnoCentive Challenge: 9932978 - Foundation for Prader-Willi Research: Advancing Appetite and Satiety Research. Available at *www.fpwr.org* and *www.innocentive.com*.
16. J.L. Resnick, R. D. Nicholls and **R. Wevrick** (2013) Recommendations for the investigation of animal models of Prader-Willi Syndrome. *Mammalian Genome* 24, 165-178.
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18. S.B. Heymsfield, N.M. Avena, L. Baier, P. Brantley, G.A. Bray, L.C. Burnett, M.G. Butler, D.J. Driscoll, J. Elmquist, J.L. Forster, A.P. Goldstone, L.M. Gourash, F.L. Greenway, J.C. Han, J.G. Kane, R.L. Leibel, R.J.F. Loos, A.O. Scheimann, C. L. Roth, R.J. Seeley, V. Sheffield, M. Tauber, C. Vaisse, L. Wang, R.A. Waterland, **R. Wevrick**, J. A. Yanovski, A.R. Zinn (2014) Hyperphagia: Current Concepts and Future Directions. Proceedings of the 2nd International Conference on Hyperphagia. *Obesity Biology and Integrated Physiology*. *Obesity* 22, S1–S17.
19. K. V. Carias and **R. Wevrick** (2019) Preclinical Testing in Translational Animal Models of Prader-Willi Syndrome: Overview and Gap Analysis. *Molecular Therapy - Methods & Clinical Development* 13: 344–358.
20. **R. Wevrick** (2020) Disentangling ingestive behavior-related phenotypes in Prader-Willi syndrome: integrating data from nonclinical studies into clinical trials. *Physiology & Behavior*, in press.