Resume

ANDREW C. ORR, MD

Personal Information:

Name:	Andrew Cameron Orr
Date of Birth:	October 12th, 1959
Citizenship:	USA, Canada, Australia
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Training and Education:

1992-93	*Fellowship, Glaucoma* Department of Ophthalmology, University of California at San Francisco, San Francisco, California Supervisors: H. Dunbar Hoskins Jr., MD. and John Hetherington Jr., MD.
1988-91	*Residency (core) in ophthalmology* Department of Ophthalmology, Dalhousie University, Halifax, Canada
1987-88	*Fellowship, glaucoma research* Department of Ophthalmology, Dalhousie University, Halifax, Canada Supervisor: Raymond P. LeBlanc, MD.
1986-87	*Internship, rotating* Ottawa Civic Hospital, Ottawa, Canada
1982-86	*Doctor of Medicine* Faculty of Medicine, Memorial University of Newfoundland, St. John's, Canada
1978-81	*Bachelor of Science, Physics (honors)* University of Bristol, Bristol, United Kingdom
1975-77	*International Baccalaureate Diploma* United World College of the Atlantic, Glamorgan, United Kingdom

Academic Awards:

1992	Glaucoma Research Foundation trainee fellowship ($27,000/year)
1991	Department of Ophthalmology Resident Research Prize, Dalhousie University
1986	Gold Medal in Surgery, Faculty of Medicine, Memorial University of Newfoundland ($500)

Professional Profile:

Positions held:

2010	Associate Professor, Department of Ophthalmology and Visual Sciences, Faculty of Medicine, Dalhousie University, Halifax, Canada
2006	Assistant Professor, Department of Pathology, Faculty of Medicine, Dalhousie University (Cross Appointment)
1996	Assistant Professor, Department of Ophthalmology and Visual Sciences, Faculty of Medicine, Dalhousie University, Halifax, Canada
1993	Lecturer, Department of Ophthalmology and Visual Sciences, Faculty of Medicine, Dalhousie University, Halifax, Canada
	Active staff: Queen Elizabeth II Health Sciences Centre, Halifax, Canada.
	Active staff: Cumberland Regional Health Care Centre, Amherst, Canada.

Memberships (Certifying Organizations)

1992	American Board of Ophthalmology (renewed 2002)
1992	California General Medical License A055941
1991	Fellow of the Royal College of Physicians and Surgeons of Canada
1987	College of Physicians and Surgeons of Nova Scotia
1987	Canadian Medical Protective Association
1986	Licentiate of the Medical Council of Canada (LMCC)
1987	Doctors Nova Scotia
1982	Canadian Medical Association

Memberships (Examining Bodies)

1996 -	MCQ Corresponding Member, Royal College of Physicians and Surgeons of Canada

Memberships (Research Organizations)

2003	American Society for Human Genetics
1986	Association for Research in Vision and Ophthalmology (ARVO)

Memberships (Clinical Organizations)

1991	Atlantic Provinces Ophthalmological Society
1987	Canadian Ophthalmological Society

Memberships (Committees)

2009	Survey Committee, Department of Anesthesia, Faculty of Medicine, Dalhousie University
2007	Search/Survey Committee, Department of Obstetrics and Gynecology, Faculty of Medicine, Dalhousie University

Research

Patents held:

2007 *Mutations in Human UBIAD1*.
Patent holders: Orr, AC (40%), Samuels, ME (30%), Guernsey, DL (15%), Dube, MP (15%)

2010 *Mutations in Human EFHD1*.
Patent holders: Orr, AC (40%), Samuels, ME (30%), Guernsey, DL (30%)

2011 *Mutations in Human PRSS56*.
Patent holders: Orr, AC (40%), Samuels, ME (30%), Guernsey, DL (30%)

Trainees Supervised

2006-10 Gaston, Daniel (Co-supervisors: Jacek Majewski, Karen Bedard)
Post-doctoral Fellow, Department of Pathology
Research area: Bioinformatics

2006-10 Jiang, Haiyan (Co-supervisors: Duane Guernsey, Mark Samuels)
Post-doctoral Fellow, Department of Pathology
Research area: Bioinformatics

2007-08 Dotchin, Stephanie: *Towards a Better Understanding of Oguchi's Disease*. Resident research project presented at Department of Ophthalmology Annual Research Day (winner of Merck prize for best basic science project, 2008 Annual Faculty of Medicine Research Day, $1,500.)

2007 Gottlieb, Chloe: *Genetic Analysis of Congenital Isolated Ptosis*. Resident research project presented at Department of Ophthalmology Annual Research Day.

1995 Dunphy, Derek: *Apraclonidine and the same-day pressure check following argon laser trabeculoplasty*. Undergraduate medical student research project.

Ph.D thesis examination committees

2013 Doucette, Lance*: The Genetic Characterization of Mendelian Ocular Disorders in the Population of Newfoundland and Labrador.*
Doctoral candidate, Memorial University of Newfoundland
Research area: Genetics

Grants Held (Investigator Initiated)

2016-17 *Establishment of a genetic database in open angle glaucoma*
Principle investigator
Source: Nova Scotia Health Authority Research Fund, $14,957.

2016-17 *Establishment of a genetic database in open angle glaucoma*
Principle investigator
Source: The Glaucoma Research Foundation of Canada, $19,866.

2011-14 *Orphan Diseases: Identifying Genes and Novel Therapeutics to Enhance Treatment (IGNITE)*
Co-applicant
Source: Genome Canada Multi-Sector Competition, $4,800,000.

2011-12 *Finding of Rare Disease Genes in Canada (FORGE)*
Co-applicant
Source: Genome Canada Multi-Sector Competition, ~ $3,000,000.

2010-11 *The Genome Research Atlantic (GREAT) Group*
Principle investigator
Source: Nova Scotia Health Research Foundation Emerging Team Competition, $10,000

2006-10 *The Atlantic Medical Genetics and Genomics Initiative (AMGGI)*
Co-investigator
Source: Genome Canada Competition III, $9,300,000.
2006-07 *Genetic Analysis of Schnyder Corneal Dystrophy*
Principle investigator
Source: Capital District Health Authority Research Fund, $15,000.
2005-06 *Genetics of Exfoliation Syndrome*
Co-investigator
Source: Marshfield Clinic Mammalian Genotyping Service, ~ US $20,000.
2005-07 *Genetic Analysis of Nanophthalmos*
Associate investigator
Source: Glaucoma Research Foundation, US $50,000.
2001-02 *Genetic Analysis of Fuchs' Endothelial Dystrophy*
Principle investigator
Source: Capital District Health Authority Research Fund, $15,000.
2006-07 *Genetic Analysis of Nanophthalmos*
Principle investigator
Source: Capital District Health Authority Research Fund, $15,000.
1998-99 *Genetic Analysis of Exfoliation Syndrome*
Principle investigator
Source: EA Baker Foundation of the Canadian National Institute of the Blind, $40,000.
1998-99 *Genetic Analysis of Exfoliation Syndrome*
Principle investigator
Source: Capital District Health Authority Research Fund, $15,000.
1997-98 *Genetic Analysis of Exfoliation Syndrome*
Principle investigator
Source: The Glaucoma Research Foundation of Canada, $4,000.

Meetings Attended (Invited)

2010 CIHR/Genome Canada workshop: Canadian Rare Genetic Disorders Consortium Development Workshop
2008 Italian National Research Council (CNR) - Genome Canada Partnership Workshop. Rome, Italy
2008 Genome Canada workshop, Health Genomics Theme Development Session. Ottawa, ON
2008 Genome Canada workshop, Personalized Health Genomics Position Paper writing group meeting. Ottawa, ON
2007 National Workshop on Genome Canada's Strategic Research Theme, Predisposition to Disease. Ottawa, ON

Invited Lectures

2014 Orr, A, McMaster C, Grant, D: *Orphan Diseases: Identifying Genes and Novel Therapeutics to Enhance Treatment (IGNITE).* Glaxo Research Labs, King of Prussia, PA, USA
2011 Orr, A, McMaster C, Grant, D: *AMGGI, IGNITE and beyond.* The Manton Center for Orphan Diseases/Harvard Medical School, Boston, MA, USA
2010 **Orr A**, *Genetic Tests: Ready for Prime-Time in Clinical Practice?* Atlantic Eye Symposium, Halifax, NS
2009 Orr, A, McMaster C, Bedard, K: *AMGGI and beyond.* The Jackson Lab, Bar Harbor, ME, USA

2008 **Orr A**, Samuels M: *Maritime Resources and AMGGI Work flow*, Merck Research Labs, Rahway, NJ, USA
2008 **Orr A**: *Leveraging a publicly-funded health care system to ascertain and characterize naturally occurring human mutations*, SharDNA Life Sciences, Cagliari, Italy.
2008 **Orr A**: *Genetic Variation*. Genome Canada – National Research Council of Italy Workshop, Rome, Italy
2008 **Orr A**: *Leveraging a publicly-funded health care system to ascertain and characterize naturally occurring human mutations*, Jackson Lab Seminar Series, Bar Harbor, USA
2006 **Orr A**, Samuels M: *Where the drug targets are: Mice, men and the Mendelian genome.* Form & Function in Ocular Disease Meeting, Halifax, Canada
2005 **Orr A**: *Genetics of Exfoliation Syndrome*. Annual Meeting of the Canadian Ophthalmology Society, Edmonton, Canada
2003 **Orr A**: *Inheritance and Genetics of Exfoliation Syndrome*. New Frontiers in Normal Tension Glaucoma and Pseudoexfoliation Meeting, University of Erlangen-Nuremberg, Erlangen, Germany
2003 **Orr A**: *Exfoliative genetics: a clinical perspective*. Ophthalmic genetics rounds, University of Erlangen-Nuremberg, Erlangen, Germany
2002 **Orr A**: *Exfoliation Syndrome*. Ophthalmic Genetics Rounds, University of Connecticut, Farmington, CN, USA
1999 **Orr A**, Robitaille J: *Exfoliation Syndrome in Maritime Canada*. Exfoliation Syndrome SIG Meeting, Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, USA

Courses Attended

2006 47th Annual Short Course on Medical and Experimental Mammalian Genetics, Jackson Lab, Bar Harbor, USA
2002 43rd Annual Short Course on Medical and Experimental Mammalian Genetics, Jackson Lab, Bar Harbor, USA
2001 *From Twin to Gene Function: An Overview of Statistical Genetics*. ARVO Saturday Educational Course

Grant reviews (ad hoc and panels):

2004 - Canadian National Institute of the Blind/Canadian Glaucoma Clinical Research Council
Ophthalmic Research Institute of Australia

Manuscript Reviews (Journal):

American Journal of Ophthalmology
Human Genetics
Clinical and Experimental Ophthalmology
Ophthalmic Genetics
PloS One
Proceedings of the 2010 International Conference on Bioinformatics
Molecular Vision
Optometry and Vision Science
Canadian Journal of Ophthalmology
Clinical and Investigative Medicine

Publications (Peer-reviewed)

1. Fernandez CV, O'Connell C, Ferguson M, **Orr AC,** Robitaille JM, Knoppers BM, McMaster CR. *Stability of Attitudes to the Ethical Issues Raised in the Return of Incidental Genomic Research* Findings in Children – A Follow up Study. Public Health Genomics (2015) doi:10.1159/000439244.
2. Aung, T, Ozaki M, Mizoguchi T et al: *A common variant mapping to CACNA1A is associated with susceptibility to exfoliation syndrome*. Nature Genetics (2015) doi:10.1038/ng.3226
3. Daniel Gaston; Samantha Hansford; Carla Oliveira; Mathew Nightingale; Hugo Pinheiro; Christine Macgillivray; Pardeep Kaurah; Andrea L Rideout; Patricia Steele; Gabriela Soares; Weei-Yuarn Huang; Scott Whitehouse; Sarah Blowers; Marissa A LeBlanc; Haiyan Jiang; Wenda Greer; Mark E Samuels; **Andrew Orr**; Conrad V Fernandez; Jacek Majewski; Mark Ludman; Sarah Dyack; Lynette S Penney; Christopher R McMaster; David Huntsman; Karen Bedard. *Germline Mutations in MAP3K6 Predispose to Gastric Cancer*, PLOS Genetics 10.10 (2014).
4. Conrad Fernandez, Eric Bouffet, David Malkin, Nada Jabado, Colleen O'Connell, Denise Avard, Bartha M. Knoppers, Meghan Ferguson, Kym M. Boycott, Poul H. Sorensen, **Andrew Orr**, Johane Robitaille & Christopher McMaster. *Attitudes of parents toward the return of targeted and incidental genomic research findings in children.* Genetics in Medicine(2014)16,633–640doi:10.1038/gim.2013.201
5. Marissa A. LeBlanc, Lynette S. Penney, Daniel Gaston, Yuhao Shi, Erika Aberg, Mathew Nightingale, Haiyan Jiang, Roxanne M. Gillett, Somayyeh Fahiminiya, Christine Macgillivray, Ellen P. Wood, Philip D. Acott, M. Naeem Khan, Mark E. Samuels, Jacek Majewski, **Andrew Orr**, Christopher R. McMaster, Karen Bedard. *A novel rearrangement of occludin causes brain calcification and renal dysfunction*. Hum Genet (2013) 132:1223–1234
6. **Orr AC**, Dubé MP, Zenteno JC, Jiang H, Asselin G, Evans SC[4], Caqueret A[5], Lakosha H[1], Letourneau L[6], Marcadier J[4], Matsuoka M[4], Macgillivray C[1,4], Nightingale M[4], Papillon-Cavanagh S[5], Perry S[4], Provost S, Ludman M, Guernsey DL, Samuels ME: *Mutations in a novel serine protease PRSS56 in families with nanophthalmos.* Molecular Vision *2011; **17**:1850-1861*
7. Guernsey DL, Jiang H, Bedard K, Evans S, Ferguson M, Matsuoka M, Macgillivray C, Nightingale M, Perry S, Rideout A, **Orr A**, Ludman M, Skidmore D, Benstead T, Samuels M: *Mutation in the gene encoding ubiquitin ligase LRSAM1 in patients with Charcot-Marie-Tooth Syndrome*. PLoS Genet 6(8): e1001081. doi:10.1371/journal.pgen.1001081
8. Guernsey DL, Jiang H, Hussin J, Arnold M, Bouyakdan K, Perry S, Babineau-Sturk T, Beis J, Dumas N, Evans S, Ferguson M,2 Matsuoka M,1 Macgillivray C, Nightingale M, Patry L, Rideout A, Thomas A, **Orr A**, Hoffmann I, Michaud J, Awadalla P, Meek D, Ludman M, Samuels M: *Mutations in Centrosomal Protein CEP152 in Primary Microcephaly Families Linked to MCPH4.* Am J Hum Genet. 2009 87(1): 40-51.
9. Guernsey DL, Dubé M-P, Jiang,H, Asselin G, Blowers S, Evans S, Ferguson M, Macgillivray C, Matsuoka M, Nightingale M, Rideout A, Delatycki, M, Orr A, Ludman M, Dooley J, Riddell C, Samuels ME: *Novel mutations in the sacsin gene in ataxia patients from Maritime Canada* J Neurol Sci (2009) in press
10. Guernsey DL, Jiang H, Evans SC, Ferguson M, Matsuoka M, Nightingale M, Rideout AL, Provost S, Bedard K, **Orr A**, Dubé MP, Ludman M, Samuels M: *Mutation in pyrroline-5-carboxylate reductase 1 gene in families with cutis laxa type 2*. Am J Hum Genet. 2009 85(1):120-9.
11. Guernsey D, Jiang H, Campagna D, Evans S, Ferguson M, Kellogg M, Lachance M, Matsuoka M, Nightingale M, Rideout A, St-Amant L, Schmidt P, **Orr A**, Bottomley S, Fleming M, Ludman M, Dyack S, Fernandez C, Samuels M: *Mutations in mitochondrial carrier family gene SLC25A38* cause

non- *syndromic autosomal recessive congenital sideroblastic anemia*. Nature Genetics, 2009 41(6):651-3.

12. Jiang H, **Orr AC**, Guernsey D, Robitaille JM, Asselin G, Samuels ME, Dubé M-P: *Application of Homozygosity Haplotype Analysis to Genetic Mapping with High-Density SNP Genotype Data*. PLoS ONE 4(4): e5280. doi:10.1371/journal.pone.0005280
13. Samuels ME, **Orr AC**, Guernsey DL, Dooley K, Riddell C, Hodgkinson K, Ludman M, Pullman D*: Is Gene Discovery Research or Diagnosis*? Genet Med 2008:10(6):385–390.
14. **Orr AC**, Dubé M-P, Marcadier J, Jiang H, Federico A, George S, Seamone C, Andrews D, Dubord P, Holland S, Provost S, Mongrain V, Evans S, Higgins B, Bowman S, Guernsey D, Samuels M: *Mutations in the UBIAD1 gene, encoding a potential prenyltransferase, are causal for Schnyder crystalline corneal dystrophy*. PLoS ONE 2(8): e685.doi:10.1371/journal.pone.0000685
15. Brinkman RR, Dube MP, Rouleau GA, **Orr AC**, Samuels, ME: *Loss-of-function genetic diseases and the concept of pharmaceutical targets monogenic disorders - a source of novel drug targets. Nature Reviews Genetics* **8**, (May 2007) | doi:10.1038/nrg1828-c2
16. Brinkman RR, Dube MP, Rouleau GA, **Orr AC**, Samuels, ME: *Human monogenic disorders - a source of novel drug targets.* Nat Rev Genet 2006 7(4): 249-60.
17. **Orr AC**, Robitaille JM, Price PA, Hamilton JR, Falvey DM, De Saint-Sardos AG, Pasternak S, Guernsey DL *Exfoliation syndrome: clinical and genetic features.* Ophthalmic Genet 2001;22(3):171-85.
18. Gupta SK, **Orr A**, Bulman D, De Becker I, Guernsey DL, Neumann PE. *A novel PAX6 frameshift mutation in a kindred from Atlantic Canada with familial aniridia*. Can J Ophthalmol 1999;34(6):330-4.
19. Rakofsky S, Lazar M, Almog Y, LeBlanc R, Mann C, **Orr A** et al: *Efficacy and safety of once-daily Levobunolol for glaucoma therapy*. Can J Ophthalmol 1989;24(1):2-6.
20. Mishra A, Ramsey M, **Orr A**: *Causes of presenile cataract extracted at the Halifax Infirmary Hospital, 1976-85*. Can J Ophthalmol 1989; 24(3):117-119.
21. Orr, A, Rubillowicz, M, LeBlanc, R, Seamone, C, Mann, C: *The use of suprathreshold test data to predict the results of quantitative testing in the nasal periphery*. Can J Ophthalmol 1990; 25(3):133-137.
22. Seamone C, LeBlanc R, Rubillowicz M, Mann C, **Orr A**: *The value of indices in the central and peripheral visual field for the detection of glaucoma.* Am J Ophthalmol 1988; 106:180-185.

Publications (acknowledged participant)

1. Haymes SA, LeBlanc RP, Nicolela MT, Chiasson LA, Chauhan BC: Glaucoma and On-Road Driving Performance. Invest Ophth Vis Sci 2008; 48(3) 3035-41.
2. Haymes SA, LeBlanc RP, Nicolela MT, Chiasson LA, Chauhan BC: Risk of falls and motor vehicle collisions in glaucoma. Invest Ophth Vis Sci 2007; 49(7) 1149-55.
3. Canadian Glaucoma Study Group: Canadian Glaucoma Study: 1. Study design, baseline characteristics and preliminary analysis Can J Ophthalmol 2006 41:566-75.
4. Canadian Glaucoma Study Group: Canadian Glaucoma Study: 2. Risk factors for the progression of open-angle glaucoma Arch Ophthalmol 2008 126(8):1030-6.

Publications (Solicited)

1. **Orr AC**, LeBlanc RP: *Use of the Octopus perimeter in glaucoma: an overview.* Ophthalmic Practice 1988; 6:115-119.

Abstracts

1. Chen PL, **Orr A**, McMaster CR, Bedard K. *Inducible Pluripotent Stem Cell Technology as a Tool to Study Arrhythmogenic Right Ventricular Cardiomyopathy in a Maritime Family*. Pathology Research Days, 2014.
2. Gaston D, Whitehouse S, M Nightingale, C MacGillivray, **Orr A**, Steele P, Rideout AL, Huang WY, Greer W, Majewski J, Dyack S, Ludman M, Penney LS, Fernandez CV, McMaster CR, Bedard K. *Mutations in MAP3K6 are Associated with Familial Gastric Cancer.* Pathology Research Days, 2014 (selected for oral presentation)
3. Robitaille J, Dyack S, *Gaston D, Chen L*, Whitehouse S, Roslin N, Nightingale M, Gillett R, Patterson I, Macgillivray C, Bramwell L, Majewski J, **Orr A**, McMaster CR*, Bedard K*. *A mutation in DST is present in individuals with congenital alacrima*. 2014 Canadian Ophthalmological Society, Halifax NS.
4. LeBlanc MA, Penney LS, Gaston D, Shi Y, Aberg E, Nightingale M, Jiang H, Gillett R, Fahiminiya S, MacGillivray C, Wood EP, Acott PD, Khan MN, Samuels ME, Majewski J, **Orr A**, McMaster CR, Bedard K. *A rearrangement in OCLN causes brain calcification and renal dysfunction*. 2013 European Society of Human Genetics Conference, Paris, France.
5. LeBlanc MA*, Nightingale M, Gaston D, Hamel N, Zhang, J, Lalonde E, Majewski J, Foulkes W, **Orr A**, Fernandez CV, McMaster CR, Bedard K. *Identification of the genomic mutation causing a rare inherited form of kidney cancer*. Beatrice Hunter Cancer Research Institute poster session Halifax, November 2012. *(* winner first place poster session)*
6. *Gaston D, **Orr A**, Fernandez CV, McMaster CR, Bedard K. *Next-Gen Sequencing, Systems Biology, and the Data Deluge: Identifying Causative Genes of Rare Diseases in the Post-Genomics Era*. 2012 Pathology Research Day, Dalhousie University, Halifax NS. *(* selected for oral presentation)*
7. LeBlanc MA, Nightingale M, Gaston D, Majewski J, **Orr A**, Fernandez CV, McMaster CR,Bedard K. *Identification of the genomic mutation causing a rare inherited form of kidney cancer*. 2012 Pathology Research Day, Dalhousie University, Halifax NS.
8. Nightingale M, Osborne N, **Orr A**, Bedard K, Riddell C. *Carrier screening in the Acadian population of the Maritime Provinces using MLPA*. 2012 Pathology Research Day, Dalhousie University, Halifax NS.
9. **Orr A**, Fleetwood I, Macgillivray C, Blowers S, Guernsey D, Sadler R: *Familial Cavernous Malformations in the Maritime Provinces*. Can J Neurol Sci 2009; 36(3 Suppl 1): S85.
10. Jiang H, Samuels M, Guernsey D, **Orr A**: *Applications of Homozygosity Haplotype in the Study of Human Genetic Diseases with High Density SNP Genotype* International Society for Computational Biology meeting, Toronto, Canada, July 2008.
11. Samuels M, Young TL, Fernandez B, Green J, Guernsey D, Ludman M, **Orr A**, Parfrey P, Pullman D, Woods M: *The Atlantic Medical Genetics and Genomics Initiative: Molecular Characterization of Monogenic Disorders in Atlantic Canada*. HUGO Human Genome Meeting 2007, Montreal, Canada, May 21-24, 2007.
12. Samuels M, **Orr A**, Guernsey D, Robitaille J: *Genetic analysis of the human genome from a systems perspective*. 4th International Conference on Pathways, Networks and Systems, Mykonos, Greece, October 8-13, 2006.
13. **Orr A**, Samuels M: *The Atlantic Medical Genetics and Genomics Initiative* (AMGGI) Poster presentation, 47th Annual Short Course in Medical and Experimental Mammalian Genetics, Jackson Lab, Bar Harbor, ME, 2006.
14. **Orr A**, Pasternak S, Falvey D, Guernsey D, Neumann P: *Autosomal recessive nanophthalmos in a family from Maritime Canada*. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, 2000.

15. **Orr AC**, Robitaille JM et al: *Clinical features and genealogy of patients with exfoliation syndrome from Maritime Canada*. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, 1999.
16. Robitaille JM, **Orr AC** et al: Is exfoliation syndrome linked to chromosome 2p16? Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, 1999.
17. **Orr A**, Chauhan B, Levy D et al: *Effect of acute intraocular pressure reduction on optic nerve head topography: a comparison between confocal scanning laser tomography and conventional photography*. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, 1997.
18. Dunphy D, **Orr A**, LeBlanc RP, Kozousek V: *Apraclonidine and the same-day pressure check following argon laser trabeculoplasty*. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, 1995.
19. **Orr A**, Hetherington J, Hoskins HD: *Visual field outcomes in trabeculectomy: a pilot study*. Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, Florida, 1993.
20. **Orr A**, Maxner C: *Neuro-ophthalmic emergencies in retrobulbar anesthesia*. XXVI Meeting of the Canadian Congress of Neurological Sciences, Halifax, Nova Scotia, 1991.
21. Rubillowicz M, **Orr A**, LeBlanc R: *Suprathreshold screening for peripheral nasal visual field defects using a modification of the Octopus program G1*. Annual Meeting of the Canadian Ophthalmological Society, Calgary, Alberta, 1989.

Grand Rounds (Invited) and Similar

2011 Pathology Grand Rounds: *AMGGI and beyond*. Department of Pathology, Dalhousie University, Halifax, NS.

2010 Internal Medicine Grand Rounds: *Deciphering the genetics of SNAX.* Moncton General Hospital, Moncton, NB.

2010 Anatomy and Neurobiology Seminars: *Leveraging the Maritime health care system to ascertain and characterize naturally occurring human mutations.*

2010 *The AMGGI Project*. Department of Anatomy and Neurobiology, Faculty of Medicine, Halifax, NS

2010 Genetics Rounds: *Selected AMGGI projects, technical developments and tractability issues.* Maritime Medical Genetics, Halifax, NS