

Curriculum Vitae

Steven Gregory Ralph, Ph.D.

Assistant Professor
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page 1 of 20

Education

- 09.1996_05.2002 Ph.D., Dept. of Biochemistry and Molecular Biology
University of British Columbia (UBC), Vancouver, Canada
Conducted research on genome organization and evolution of the ATP-Binding Cassette (ABC) transporter family in higher eukaryotes, as well as transcript profiling of the human ABC family in normal and cancerous tissues, and in response to chemotherapeutic drug exposure.
Supervisor: Dr. Victor Ling
- 09.1991_05.1996 B.Sc. (Honours) in Biological Sciences
University of Windsor (U of W), Windsor, Canada

Employment and research training

- 07.2007_present Assistant Professor, Dept. of Biology, University of North Dakota (UND)
As Principle Investigator, established and equipped a new molecular biology laboratory, along with a plant growth room and greenhouse space. These facilities will be used to discover and characterize mechanisms of defense against feeding insects in poplar. Research approaches include large-scale transcript profiling via microarray and real-time PCR analyses, functional characterization of candidate defense proteins using biochemical approaches and RNAi knock-down, and discovery of novel defense genes using activation tagging mutant populations.
- 10.2005_06.2007 Post-doctoral Research Associate
Genome Canada *Conifer Forest Health* program, Michael Smith Laboratories, UBC
Directed a research team of 3-4 staff and students focused on characterizing the role of phenolic defenses in spruce trees against stem-boring insects using functional genomics, biochemical and ecological approaches. Lead Research Associate coordinating the sequencing, annotation and evolutionary analysis of ca. 10,000 spruce full-length cDNAs together with the British Columbia Cancer Agency Genome Sciences Centre (GSC). Supervisor: Dr. Jörg Bohlmann
- 02.2002_09.2005 Post-doctoral Research Associate
Genome Canada *Treenomix* program, Dept. of Forest Sciences, UBC
Established and equipped a new research laboratory housing the *Treenomix* program in the Dept. of Forest Sciences. Hired, trained and directed a research team of 4-8 staff to develop and apply functional genomics resources for the study of plant-insect interactions in spruce and poplar tree species. Lead Research Associate coordinating research activities and project management for several multi-million dollar genomics projects [i.e., ca. 375,000 expressed sequence tags (ESTs), ca. 14,000 full-length cDNAs, 15.5K and 21.8K cDNA microarray formats, and supporting DNA sequence and microarray databases] in collaboration with national research centres including the GSC, the Prostate Centre at Vancouver General Hospital, and the Biotechnology Research Institute in Montreal. Scientific contributor and member of the international consortium that completed the mapping and sequencing of the first tree genome (black cottonwood). Supervisor: Dr. Jörg Bohlmann
- 05.1993_08.1996 Research Assistant
Dept. of Biological Sciences, U of W
Conducted research on the genotoxic effects of environmental contaminants and pesticides on aquatic sentinel organisms using assays for genomic DNA damage.
Supervisor: Dr. Michael Petras

Employment and research training (continued)

05.1993_05.1994 Animal Quarters Technician
Dept. of Biological Sciences, U of W
Research technician responsible for the maintenance of a departmental animal quarters facility housing small mammals and aquatic species. Supervisor: Dr. Michael Petras

Awards, scholarships and fellowships

05.2008 UND New Faculty Scholar Award, \$5,000

01.2008 UND Faculty Research Proposal Writing Fellowship, \$1,000

07.2006 Arthur Neish Young Investigator Award, Phytochemistry Society of North America, \$500

03.2001 Patricia Manson Post-doctoral Fellowship, Lymphoma Foundation of Canada, \$40,000 per annum, declined

09.2000_08.2001 University Graduate Fellowship, UBC, \$16,000

09.1998_08.2000 Izaak Walton Killam Memorial Pre-doctoral Fellowship, \$20,000 per annum

09.1996_08.2000 Natural Sciences and Engineering Research Council of Canada Post-graduate Scholarship, \$19,000 per annum

05.1996 Board of Governor's Medal in Biological Sciences, U of W (highest graduating academic average; no monetary value)

Teaching

08.2009_12.2009
08.2007_12.2007 Co-instructor, BIOL491/503 *Ecological Genomics Seminar*, Dept. of Biology, UND

06.2009 Guest lecturer, BIOL315 *Genetics*, Dept. of Biology, UND

01.2009_05.2009
01.2008_05.2008 Instructor, BIOL415 *Genomics*, Dept. of Biology, UND

01.2009_05.2009 Instructor, BIOL410 *Molecular Biology Techniques*, Dept. of Biology, UND

11.2008 Guest lecturer, BIOL410 *Molecular Biology Techniques*, Dept. of Biology, UND
Developed and presented a new three week laboratory for the course.

11.2008 Guest lecturer, CHEM333 *Analytical Chemistry*, Dept. of Chemistry, UND

10.2008 Guest lecturer, BIOL150 *General Biology*, Dept. of Biology, UND

01.2007_05.2007 Co-instructor, BIOL462 *Ecological Plant Biochemistry*, Dept. of Botany, UBC

07.2004_06.2006 Instructor, *Scientist in Residence* elementary school program, Vancouver School Board, Vancouver

03.2006 Guest lecturer, FRST302 *Forest Genetics*, Dept. of Forest Sciences, UBC

09.2005 Guest lecturer, FRST535 *Applied Population Genetics*, Dept. of Forest Sciences, UBC

Teaching (continued)

01.2002_05.2002	Co-instructor, <i>Advanced Molecular Biology Laboratory Outreach</i> program, Michael Smith Laboratories, UBC
01.2000_12.2002	Instructor, <i>Hands-on Science</i> program, Science World, provincial science education centre, Vancouver
05.2000_08.2000 05.1999_08.1999	Volunteer instructor, <i>Surrey School District Career Education</i> program, Surrey School Board, Surrey, Canada
01.1995_05.1995 01.1994_05.1994	Teaching Assistant, 55-211 <i>Genetics</i> , Dept. of Biology, U of W
09.1993_12.1993	Teaching Assistant, 55-250 <i>Comparative Vertebrate Zoology</i> , Dept. of Biology, U of W

Direct supervision of staff

07.2008_05.2009	Diana Bertrand	Research Assistant (UND)
06.2003_12.2008	Sharon Jancsik	Research Assistant (<i>Treenomix</i> ; <i>Conifer Forest Health</i> , UND)
05.2006_08.2006	Tina Chou	Summer student (<i>Conifer Forest Health</i>)
04.2003_10.2005	Claire Oddy	Research Assistant (<i>Treenomix</i>)
07.2003_10.2005	Hesther Yueh	Research Assistant (<i>Treenomix</i>)
05.2005_09.2005	Michelle Tang	Summer student (<i>Treenomix</i>)
09.2004_08.2005	Gillian Leung	Co-op student (<i>Treenomix</i>)
02.2002_08.2004	Natalia Kolosova	Research Assistant (<i>Treenomix</i>)
05.2004_08.2004	Javier Alfaro	Summer student (<i>Treenomix</i>)
05.2004_08.2004	Luke Brocki	Summer student (<i>Treenomix</i>)
05.2004_08.2004	Xiao Ling Li	Summer student (<i>Treenomix</i>)
05.2002_08.2003	Dawn Cooper	Research Assistant (<i>Treenomix</i>)
05.2001_08.2001	Krista Cleveland	Research Assistant (BC Cancer Research Centre)
05.2001_08.2001	Ron deLeeuw	Research Assistant (BC Cancer Research Centre)
05.2001_08.2001	Bradley Coe	Research Assistant (BC Cancer Research Centre)

Mentoring of students

10.2008_present	Alicia Grant	AURA scholar undergraduate researcher, Dept. of Biology, UND
05.2008_present	Justin Burum	Chair, MS thesis committee, Dept. of Biology, UND
05.2008_present	Haylee Dassinger	AURA scholar undergraduate researcher, Dept. of Biology, UND
04.2008_present	Erika Olson	Member, MS thesis committee, supervisor Dr. Jefferson Vaughn, Dept. of Biology, UND
11.2007_present	Ken Cabarle	Member, Ph.D. thesis committee, supervisor Dr. Robert Newman, Dept. of Biology, UND
10.2008_05.2009	Dale Brunelle	McNair scholar undergraduate researcher, Dept. of Biology, UND
05.2003_07.2007	Ryan Philippe	Ph.D. student (Botany, UBC)
09.2004_07.2007	Natalia Kolosova	Ph.D. student (Botany, UBC)
01.2005_07.2007	Jason Holliday	Member, Ph.D. thesis committee, supervisor Dr. Sally Aitken, Dept. of Forest Sciences, UBC
09.2006_07.2007	Tina Chou	Master's student (Botany, UBC)
01.2004_05.2006	Scott DiGuistini	Master's student (Wood Science, UBC)
01.2006_03.2006	Eric Abbott	Honours project (Botany, UBC)
09.2004_12.2005	Alex Lane	Master's student (Botany, UBC)
05.2000_08.2000	Jenny Cheng	Master's student (Pathology & Laboratory Medicine, UBC)
09.1998_05.2001	Allison Pahl	Master's student (Biochemistry, UBC)

Professional activities and development

Ad hoc journal reviewer for *The Plant Journal* (2008, 2009), *Plant Molecular Biology* (2006), *New Phytologist* (2004, 2006, 2007, 2009), *Plant Biology* (2009), *International Journal of Cancer* (2000), *Clinical Cancer Research* (1999), *Cancer Research* (1997-2001)

06.2008	Certificate, University within the University, UND: <i>Laboratory Safety</i>
09.2007_05.2008	Participant, Alice T. Clark Scholars Mentoring Program, UND
05.2008	Certificate, St. Alexius Medical Center Employee Assistance Program, UND: <i>So Now You're a Supervisor</i>
11.2008	<i>Ad hoc</i> grant reviewer for the Ohio State Seed Grant Competition
04.2008	<i>Ad hoc</i> grant reviewer for National Science Foundation Plant Genome Research Program
04.2008	Certificate, University within the University, UND: <i>Responsible Conduct of Research</i>
01.2008	Certificate, Center for Instructional and Learning Technologies, UND: <i>Presenting Content in Blackboard</i>
01.2008	Certificate, Center for Instructional and Learning Technologies, UND: <i>Creating & Managing Groups & Assignments in Blackboard</i>
11.2007	Certificate, Center for Instructional and Learning Technologies, UND: <i>Getting Started with Blackboard</i>
09.2006	Certificate, Institute for Communication Improvement: <i>Professional Grant Proposal Writing</i> workshop, Simon Fraser University, Burnaby, Canada
05.2006	Certificate, Centre for Teaching and Academic Growth: <i>Instructional Skills Workshop for Faculty</i> , UBC
12.2004	Invited contributor, poplar genome annotation jamboree, Dept. of Energy Joint Genomes Institute, Walnut Creek, USA
01.1998_12.2001	Manager/operator, British Columbia Cancer Research Centre (Vancouver) sequencing facility (ca. 2.5 million basepair/year, plus DNA fragment analysis)

Professional affiliations

01.2003_present	International <i>Populus</i> Genome Consortium
06.2005_present	Canadian Society of Plant Physiologists
01.2006_present	American Society of Plant Biologists
01.2006_present	Phytochemical Society of North America
01.2006_present	International Society of Chemical Ecology
03.2007_present	Great Plains Tree Pest Council

University and community service

03.2009_present	Member, Institutional Biosafety Committee, UND
10.2008_present	Member, <i>ad hoc</i> Dept. of Biology Graduate Student Recruitment committee, UND

University and community service (continued)

- 09.2008_present Member, Academic Programs and Student Awards Committee, Dept. of Biology, UND
- 09.2007_present Member, Dept. of Biology Seminar committee, UND
- 08.2009 Participant, 2009 Welcome Weekend, Campus Life Small Group discussion, UND
- 04.2009 Opened Northern Plains Biological Symposium, UND
- 02.2008_08.2009 Member, Invention Disclosure committee, UND
- 11.2008 Participant, 2008 Graduate & Professional School Information Day
- 07.1999_07.2002 Contributed to the Canadian Cancer Society's *Camp Goodtimes* in various capacities including Camp Director, Camp Counselor and fundraiser Event Staff
- 01.1996_12.1998 Student representative, Dept. Biochemistry & Molecular Biology Safety Committee, UBC
- 01.1997_12.1997 Co-founder and co-chair of the *Science, Engineering and Technology Innovations* seminar series at Green College, UBC
- 08.1992_04.1997 Contributed to minor hockey in Ontario and British Columbia in various capacities including Team Manager, Head Coach and Assistant Coach

Grant support

- 08.2009_07.2012, Genomic Approaches to Identify Insect Resistance Genes in Poplar Trees. National Science Foundation Plant Genome Research Program, \$677,356, PI: Steven G. Ralph, Co-PIs: David Dai (North Dakota State Univ.) and Matias Kirst (Univ. of Florida).
- 05.2009_08.2010, Identification and Functional Characterization of Candidate Insect Resistance Genes in Poplar Trees Using Forward Genetics. UND Faculty Research Seed Money grant, \$11,939, PI: Steven G. Ralph.
- 05.2009, Identification of Insect Resistance Genes in Poplar Trees Using Forward Genetics. North Dakota EPSCoR Advanced Undergraduate Research Award (AURA), \$7,500, PI: Steven G. Ralph, student award recipient: Alicia Grant.
- 05.2008, Improvement of Insect Resistance in Poplar Trees Using Activation Tagged Forward Genetics. UND New Faculty Scholar Award, \$5,000, PI: Steven G. Ralph.
- 05.2008, Improvement of Insect Resistance in Poplar Trees Using Activation Tagged Forward Genetics. North Dakota EPSCoR Advanced Undergraduate Research Award (AURA), \$7,500, PI: Steven G. Ralph, student award recipient: Haylee Dassinger.
- 07.2007, Functional genomics of plant-insect interactions. Start-up funds provided by North Dakota EPSCoR and the University of North Dakota, \$350,000, PI: Steven G. Ralph.

Peer reviewed journal publications, book chapters and conference proceedings

Total peer-reviewed journal publications: 33

First/co-first author: 15; second author: 9; contributing author: 9; corresponding author: 1

Total book chapters, theses and conference proceedings: 4

First/co-first author: 1; second author: 2; contributing author: 1; corresponding author: 0

Total citations: 847; group citations: 124; self citations: 86.

Citations were extracted from the Scopus database (www.scopus.com) December 31st, 2008. Group-citations occur when one or more authors on the cited paper are also an author on the citing paper. Self-citations occur when "Ralph, S" is an author on both the cited and citing papers. Note that self-citations are not included among group-citations. Impact Factors (IF) are provided for the year the article was published. When IFs are not available for the year of publication then the most recent year in which the journal was ranked is given.

*Co-lead authors contributed equally to this work.

37. **Ralph SG** (2009) Studying *Populus* defenses against insect herbivores in the post-genomic era. **Critical Reviews in Plant Sciences**, in press.

36. *Philippe RN, ***Ralph SG**, Külheim C, Jancsik SI, Bohlmann J (2009) Poplar defense against insects: Genome analysis, full-length cDNA cloning, and transcriptome and protein analysis of the poplar Kunitz-type protease inhibitor family. **New Phytologist**, in press.

35. Lippert DN, **Ralph SG**, Phillips M, White R, Smith D, Hardie D, Gershenzon J, Ritland K, Borchers CH, Bohlmann J (2009) Quantitative iTRAQ proteome and comparative transcriptome analysis of elicitor-induced Norway spruce (*Picea abies*) cells reveals elements of calcium signaling in the early conifer defense response. **Proteomics** 9: 350-367 (in print January 2009). International, peer-reviewed journal; 2007 IF: 5.47

34. **Ralph SG**, Chun HJE, Kolosova N, Cooper D, Oddy C, Ritland CE, Kirkpatrick R, Moore R, Barber S, Holt RA, Jones SJM, Marra MA, Douglas CJ, Ritland K, Bohlmann J (2008) A conifer genomics resource of 200,000 spruce (*Picea* spp.) ESTs and 6,464 high-quality, sequence-finished full-length cDNAs for Sitka spruce (*Picea sitchensis*). **BMC Genomics** 9: 484 (17 pages; in print October 2008). International, peer-reviewed journal; 2007 IF: 4.18

33. de Azevedo Souza C, Barbazuk B, **Ralph SG**, Bohlmann J, Hamberger B, Douglas CJ (2008) Genome-wide analysis of a land plant-specific *acyl:coenzymeA synthetase* (ACS) gene family in *Arabidopsis*, poplar, rice and *Physcomitrella*. **New Phytologist** 179: 987-1003 (in print September 2008). International, peer-reviewed journal; 2007 IF: 5.24; total citations: 0; group citations: 0; self citations: 0

32. Holliday JA, **Ralph SG**, White R, Bohlmann J, Aitken SN (2008) Global monitoring of autumn gene expression within and among phenotypically divergent populations of Sitka spruce (*Picea sitchensis*). **New Phytologist** 178: 103-122 (in print April 2008). International, peer-reviewed journal; 2007 IF: 5.24; total citations: 2; group citations: 0; self citations: 1

31. ***Ralph SG**, *Chun HJE, Cooper D, Kirkpatrick R, Kolosova N, Gunter L, Tuskan GA, Douglas CJ, Holt RA, Jones SJM, Marra MA, Bohlmann J (2008) Analysis of 4,664 high-quality sequence-finished poplar full-length cDNA clones and their utility for the discovery of genes responding to insect feeding. **BMC Genomics** 9: 57 (18 pages; in print January 2008). International, peer-reviewed journal; 2007 IF: 4.18; total citations: 1; group citations: 0; self citations: 1

Peer reviewed journal publications, book chapters and conference proceedings (continued)

30. Phillips MA, Walter MH, **Ralph SG**, Dabrowska P, Luck K, Urós EM, Boland W, Strack D, Rodriguez-Concepción M, Bohlmann J, Gershenzon J (2007) Functional identification and differential expression of 1-deoxy-D-xylulose 5-phosphate synthase in induced terpenoid resin formation of Norway spruce (*Picea abies*). **Plant Molecular Biology** 65: 243-257 (in print October 2007).

International, peer-reviewed journal; 2007 IF: 3.84; total citations: 5; group citations: 1; self citations: 0

29. **Ralph SG**, Jancsik S, Bohlmann J (2007) Dirigent proteins in conifer defense II: Extended gene discovery, phylogeny, and constitutive and stress-responsive gene expression analysis in spruce (*Picea* spp.). **Phytochemistry** 68: 1974-1990; invited paper (in print July 2007).

International, peer-reviewed journal; 2007 IF: 2.32; total citations: 4; group citations: 0; self citations: 1

28. Bérubé Y, Zhuang J, Rungis D, **Ralph S**, Bohlmann J, Ritland K (2007) Characterization of EST-SSRs in loblolly pine and spruce. **Tree Genetics and Genomes** 3: 251-259 (in print July 2007).

International, peer-reviewed journal; 2007 IF: 1.17; total citations: 2; group citations: 0; self citations: 1

27. *Miranda M, ***Ralph SG**, Mellway R, White R, Heath MC, Bohlmann J, Constabel CP (2007) The transcriptional response of hybrid poplar (*Populus trichocarpa* x *P. deltoides*) to infection by *Melampsora medusae* leaf rust involves induction of flavonoid pathway genes leading to the accumulation of proanthocyanidins. **Molecular Plant-Microbe Interactions** 20: 816-831 (in print July 2007).

International, peer-reviewed journal; 2007 IF: 4.27; total citations: 8; group citations: 1; self citations: 1

26. Friedmann M, **Ralph SG**, Aeschliman D, Zhuang J, Ritland K, Ellis BE, Bohlmann J, Douglas CJ (2007) Microarray gene expression profiling of developmental transitions in Sitka spruce (*Picea sitchensis*) apical shoots. **Journal of Experimental Botany** 58: 593-614 (in print February 2007).

International, peer-reviewed journal; 2007 IF: 3.91; total citations: 6; group citations: 0; self citations: 2

25. DiGuistini S, **Ralph SG**, Lim YW, Holt R, Jones S, Bohlmann J, Breuil C (2007) Generation and annotation of lodgepole pine and oleoresin-induced expressed sequences from the blue-stain fungus *Ophiostoma clavigerum*, a mountain pine beetle-associated pathogen. **FEMS Microbiology Letters** 267: 151-158 (in print February 2007).

International, peer-reviewed journal; 2007 IF: 2.27; total citations: 3; group citations: 0; self citations: 0

24. ***Ralph SG**, *Hudgins JW, Jancsik S, Franceschi VR, Bohlmann J (2007) Aminocyclopropane carboxylic acid synthase is a regulated step in ethylene-dependent induced conifer defense: Full-length cDNA cloning of a multigene family, differential constitutive, and wound- and insect-induced expression, and cellular and subcellular localization in spruce and Douglas fir. **Plant Physiology** 143: 410-424 (in print January 2007).

International, peer-reviewed journal; 2007 IF: 6.36; total citations: 8; group citations: 1; self citations: 2

23. Lippert D, Chowrira S, **Ralph SG**, Zhuang J, Aeschliman D, Ritland C, Ritland K, Bohlmann J (2007) Conifer defense against insects: Proteome analysis of Sitka spruce (*Picea sitchensis*) bark induced by mechanical wounding or feeding by white pine weevils (*Pissodes strobi*). **Proteomics** 7: 248-270 (in print January 2007).

International, peer-reviewed journal; 2007 IF: 5.47; total citations: 7; group citations: 1; self citations: 1

22. *Hudgins JW, ***Ralph SG**, Franceschi VR, Bohlmann J (2006) Ethylene in induced conifer defense: cDNA cloning, protein expression, and cellular and subcellular localization of 1-aminocyclopropane-1-carboxylate oxidase in resin duct and phloem parenchyma cells. **Planta** 224: 865-877 (in print September 2006).

International, peer-reviewed journal; 2006 IF: 2.96; total citations: 10; group citations: 1; self citations: 5

Peer reviewed journal publications, book chapters and conference proceedings (continued)

21. Tuskan GA, DiFazio S[†], Jansson S[†], Bohlmann J[†], Grigoriev I[†], Hellsten U[†], Putnam N[†], **Ralph S[†]**, Rombauts S[†], Salamov A[†], Schein J[†], Sterck L[†], Aerts A, Bhale Rao RR, Bhale Rao RP, Blaudez D, Boerjan W, Brun A, Brunner A, Busov V, Campbell M, Carlson J, Chalot M, Chapman J, Chen GL, Cooper D, Coutinho PM, Couturier J, Covert S, Cronk Q, Cunningham R, Davis J, Degroove S, Déjardin A, dePamphilis C, Detter J, Dirks B, Dubchak I, Duplessis S, Ehlting J, Ellis B, Gendler K, Goodstein D, Gribskov M, Grimwood J, Groover A, Gunter L, Hamberger B, Heinze B, Helariutta Y, Henrissat B, Holligan D, Holt R, Huang W, Islam-Faridi N, Jones S, Jones-Rhoades M, Jorgensen R, Joshi C, Kangasjärvi J, Karlsson J, Kelleher C, Kirkpatrick R, Kirst M, Kohler A, Kalluri U, Larimer F, Leebens-Mack J, Leplé J-C, Locascio P, Lucas S, Martin F, Montanini B, Napoli C, Nelson DR, Nelson C, Nieminen K, Nilsson O, Pereda V, Peter G, Philippe R, Pilate G, Poliakov A, Razumovskaya J, Richardson P, Rinaldi C, Ritland K, Rouzé P, Ryabov D, Schmutz J, Schrader J, Segerman B, Shin H, Siddiqui A, Sterky F, Terry A, Tsai C-J, Uberbacher E, Unneberg P, Vahala J, Wall K, Wessler S, Yang G, Yin T, Douglas C[‡], Marra M[‡], Sandberg G[‡], Van de Peer Y[‡], Rokhsar D[‡] (2006) The genome of black cottonwood, *Populus trichocarpa* (Torr. & Gray). **Science** 313: 1596-1604 (in print September 2006).

[‡] These authors (5) contributed equally to this work as senior authors

[†] These authors (11) contributed equally to this work as second authors

International, peer-reviewed journal; 2006 IF: 29.78; total citations: 247; group citations: 63; self citations: 5

20. **Ralph SG**, Yueh H, Friedmann M, Aeschliman D, Zeznik JA, Nelson CC, Butterfield YSN, Kirkpatrick R, Liu J, Jones SJM, Marra MA, Douglas CJ, Ritland K, Bohlmann J (2006) Conifer defense against insects: Microarray gene expression profiling of Sitka spruce (*Picea sitchensis*) induced by mechanical wounding or feeding by spruce budworms (*Choristoneura occidentalis*) or white pine weevils (*Pissodes strobi*) reveals large-scale changes of the host transcriptome. **Plant, Cell and Environment** 29: 1545-1570 (in print August 2006).

International, peer-reviewed journal; 2006 IF: 4.13; total citations: 35; group citations: 6; self citations: 8

19. Ritland K, **Ralph S**, Lippert D, Rungis D, Bohlmann J (2006) New directions in conifer genomics. In Williams C (ed): "**Landscapes, Genomics and Transgenic Conifer Forests.**" New York: Kluwer-Springer Press, pp 75-84.

Invited book chapter, non-peer review

18. **Ralph S**, Oddy C, Cooper D, Yueh H, Jancsik S, Kolosova N, Philippe RN, Aeschliman D, White R, Huber D, Ritland CE, Benoit F, Rigby T, Nantel A, Butterfield YSN, Kirkpatrick R, Chun E, Liu J, Palmquist D, Wynhoven B, Stott J, Yang G, Barber S, Holt RA, Siddiqui A, Jones SJM, Marra MA, Ellis BE, Douglas CJ, Ritland K, Bohlmann J (2006) Genomics of hybrid poplar (*Populus trichocarpa* x *deltoides*) interacting with forest tent caterpillars (*Malacosoma disstria*): Normalized and full-length cDNA libraries, expressed sequence tags (ESTs), and a cDNA microarray for the study of insect-induced defenses in poplar. **Molecular Ecology** 15: 1275-1297; invited paper (in print April 2006).

International, peer-reviewed journal; 2006 IF: 4.82; total citations: 39; group citations: 6; self citations: 5

17. ***Ralph S**, ***Park JY**, Bohlmann J, Mansfield SD (2006) Dirigent proteins in conifer defense: gene discovery, phylogeny and differential wound- and insect-induced expression of a family of DIR and DIR-like genes in spruce (*Picea* spp.). **Plant Molecular Biology** 60: 21-40 (in print January 2006).

International, peer-reviewed journal: 2006 IF: 3.32; total citations: 23; group citations: 3; self citations: 7

16. Park JY, **Ralph S**, Bohlmann J, Mansfield SD (2005) The multigene dirigent family of Sitka Spruce (*Picea sitchensis*): differential gene expression in response to wounding. **Proceedings of the 13th International Symposium on Wood and Pulping Chemistry (ISWPC)**, Auckland, New Zealand. Vol. 2: 181-188 (in print May 2005).

Conference proceeding, peer-reviewed

15. Lippert D, Zhuang J, **Ralph S**, Ellis DE, Gilbert M, Olafson R, Ritland K, Ellis B, Douglas CJ, Bohlmann J (2005) Proteome analysis of early somatic embryogenesis in *Picea glauca*. **Proteomics** 5: 461-473 (in print February 2005).

International, peer-reviewed journal; 2005 IF: 6.08; total citations: 24; group citations: 3; self citations: 3

Peer reviewed journal publications, book chapters and conference proceedings (continued)

14. Miller B, Madilao LL, **Ralph S**, Bohlmann J (2005) Insect-induced conifer defense. White pine weevil and methyl jasmonate induce traumatic resinosis, *de novo* formed volatile emissions, and accumulation of terpenoid synthase and putative octadecanoid pathway transcripts in Sitka spruce. ***Plant Physiology*** 137: 369-382 (in print January 2005).

International, peer-reviewed journal; 2005 IF: 6.11; total citations: 51; group citations: 10; self citations: 9

13. Huber DP, **Ralph S**, Bohlmann J (2004) Genomic hardwiring and phenotypic plasticity of terpenoid-based defenses in conifers. ***Journal of Chemical Ecology*** 30: 2399-2418 (in print December 2004).

International, peer-reviewed journal; 2004 IF: 1.60; total citations: 24; group citations: 11; self citations: 6

12. Rungis D, Bérubé Y, Zhuang J, **Ralph S**, Ritland CE, Ellis BE, Douglas C, Bohlmann J, Ritland K (2004) Robust simple sequence repeat markers for spruce (*Picea* spp.) from expressed sequence tags. ***Theoretical & Applied Genetics*** 109: 1283-1294 (in print October 2004).

International, peer-reviewed journal; 2004 IF: 2.98; total citations: 29; group citations: 3; self citations: 4

11. Kolosova N, Miller B, **Ralph S**, Ellis BE, Douglas C, Ritland K, Bohlmann J (2004) Isolation of high-quality RNA from gymnosperm and angiosperm trees. ***Biotechniques*** 36: 821-824 (in print May 2004).

International, peer-reviewed journal; 2004 IF: 2.54; total citations: 23; group citations: 5; self citations: 11

10. Sheps JA, **Ralph S**, Zhao Z, Baillie DL, Ling V (2004) The ABC transporter gene family of *Caenorhabditis elegans* has implications for the evolutionary dynamics of multidrug resistance in eukaryotes. ***Genome Biology*** 5: R15.1-R15.17 (in print February 2004)

International, peer-reviewed journal: 2005 IF: 9.71; total citations: 47; group citations: 6; self citations: 0

9. Guan Y, **Ralph S**, Hogge DE (2002) Polyclonal normal hematopoietic progenitors in patients with acute myeloid leukemia. ***Experimental Hematology*** 30: 721-728 (in print July 2002).

International, peer-reviewed journal; 2002 IF: 3.36; total citations: 6; group citations: 1; self citations: 0

8. **Ralph SG** (2002) mRNA expression profiling of the ATP-Binding Cassette transporter family. Ph.D. dissertation, Department of Biochemistry and Molecular Biology, University of British Columbia, Vancouver, Canada, pp 1-223 (in print April 2002).

Ph.D. dissertation, peer-reviewed

7. **Ralph S** and Petras M (1998) Comparison of sensitivity to methyl methanesulphonate among tadpole developmental stages using the alkaline single-cell gel electrophoresis (comet) assay. ***Environmental & Molecular Mutagenesis*** 31: 374-382 (in print May 1998).

International, peer-reviewed journal; 1998 IF: 2.25; total citations: 7; group citations: 0; self citations: 0

6. **Ralph S** and Petras M (1998) Caged amphibian tadpoles and *in situ* genotoxicity monitoring of aquatic environments with the alkaline single cell gel electrophoresis (comet) assay. ***Mutation Research*** 413: 235-250 (in print March 1998).

International, peer-reviewed journal; 1998 IF: 2.06; total citations: 11; group citations: 0; self citations: 0

5. **Ralph S** and Petras M (1997) Genotoxicity monitoring of small bodies of water using two species of tadpoles and the alkaline single cell gel (comet) assay. ***Environmental & Molecular Mutagenesis*** 29: 418-430 (in print May 1997).

International, peer-reviewed journal; 1997 IF: 2.46; total citations: 25; group citations: 0; self citations: 3

4. Clements C, **Ralph S**, Petras M (1997) Genotoxicity of select herbicides in *Rana catesbeiana* tadpoles using the alkaline single cell gel DNA electrophoresis (comet) assay. ***Environmental & Molecular Mutagenesis*** 29: 277-288 (in print April 1997).

International, peer-reviewed journal; 1997 IF: 2.46; total citations: 73; group citations: 0; self citations: 3

Peer reviewed journal publications, book chapters and conference proceedings (continued)

3. **Ralph S**, Petras M, Pandrangi R, Vrzoc M (1996) Alkaline single-cell gel (comet) assay and genotoxicity monitoring using two species of tadpoles. *Environmental & Molecular Mutagenesis* 28: 112-120 (in print July 1996).

International, peer-reviewed journal; 1996 IF: 1.94; total citations: 35; group citations: 1; self citations: 3

2. Petras M, Vrzoc M, Pandrangi R, **Ralph S**, Perry K (1995) Biological monitoring of environmental genotoxicity in southwestern Ontario. In Butterworth FM, Corkum LD, Guzman-Rincon J (eds.): "*Biomonitoring and Biomarkers as Indicators of Environmental Change*." New York: Plenum Press, pp 115-137.

Invited book chapter, non-peer review

1. Pandrangi R, Petras M, **Ralph S**, Vrzoc M (1995) Alkaline single cell gel (comet) assay and genotoxicity monitoring using bullheads and carp. *Environmental & Molecular Mutagenesis* 26: 345-356 (in print September 1995).

International, peer-reviewed journal; 1995 IF: 2.37; total citations: 92; group citations: 1; self citations: 4

Large-scale DNA sequence submissions to GenBank

Total Expressed Sequence Tag (EST) submissions: 375,735

Total full-length cDNA submissions: 13,772

9. Reid KE, Liao N, Chun HE, **Ralph S**, Gillan T, Jancsik S, Moore R, Mayo M, Wagner S, Featherstone R, Roger J, Brown-John M, Tam B, Sze WK, Wilton J, Kirk H, Matsuo C, King J, Yanchuk A, Holt R, Jones S, Marra M, Ritland CE, Ritland K, Bohlmann J (2008) The spruce transcriptome: Analysis of expressed sequence tags from multiple cDNA libraries; 10,233 ESTs submitted to dbEST division of GenBank (accession numbers FD729870 to FD740102, released February 2008).

8. **Ralph SG**, Chun HJE, Liao N, Ali J, Reid KE, Kolosova N, Cooper N, Cullis C, Jancsik S, Moore R, Mayo M, Wagner S, Holt RA, Jones SJM, Marra MA, Ritland CE, Ritland K, Bohlmann J (2007) The spruce transcriptome: Analysis of 2,644 sequence-verified full-length cDNAs; submitted to non-redundant division of GenBank (accession numbers EF676105 to EF678748; public release upon publication).

7. **Ralph SG**, Kirkpatrick R, Chun HJE, Palmquist D, Wynhoven B, Kolosova N, Cooper D, Oddy C, Jancsik S, Ritland CE, Douglas CJ, Butterfield YSN, Liu J, Stott J, Yang G, Barber S, Holt RA, Siddiqui A, Jones SJM, Marra MA, Ritland K, Bohlmann J (2007) The spruce transcriptome: Analysis of 6,464 sequence-verified full-length cDNAs; submitted to non-redundant division of GenBank (accession numbers EF081469 to EF087932; released December 2007).

6. **Ralph SG**, Chun HJE, Cooper D, Kirkpatrick R, Palmquist D, Wynhoven B, Kolosova N, Oddy C, Jancsik S, Douglas CJ, Butterfield YSN, Stott J, Yang G, Holt RA, Siddiqui A, Jones SJM, Marra MA, Ritland K, Bohlmann J (2007) The poplar transcriptome: Analysis of 4,664 sequence-verified full-length cDNAs; submitted to non-redundant division of GenBank (accession numbers EF144175 to EF148838; released December 2007).

5. **Ralph S**, Kolosova N, Oddy C, Chun E, Reid KE, Liao N, Jancsik S, Moore R, Mayo M, Wagner S, King J, Yanchuk A, Holt R, Jones S, Marra M, Ritland CE, Ritland K, Bohlmann J (2007) The spruce transcriptome: Analysis of expressed sequence tags from multiple cDNA libraries; 27,738 ESTs submitted to dbEST division of GenBank (accession numbers ES852448 to ES880185; released June 2007).

4. Reid KE, Chun HE, **Ralph S**, Gillan T, Jancsik S, Liao N, Moore R, Mayo M, Wagner S, Featherstone R, Roger J, Brown-John M, Tam B, Sze WK, Wilton J, Kirk H, Matsuo C, King J, Yanchuk A, Holt R, Jones S, Marra M, Ritland CE, Ritland K, Bohlmann J (2007) The spruce transcriptome: Analysis of expressed sequence tags from multiple cDNA libraries; 31,043 ESTs submitted to dbEST division of GenBank (accession numbers ES244996 to ES263233, released April 2007; and ES659089 to ES671893, released June 2007).

Large-scale DNA sequence submissions to GenBank (continued)

3. DiGuistini S, **Ralph SG**, Lim YW, Holt R, Jones S, Bohlmann J, Breuil C (2006) Generation and annotation of lodgepole pine and oleoresin-induced expressed sequences from the blue-stain fungus *Ophiostoma clavigerum*, a Mountain Pine Beetle associated pathogen; 5,974 ESTs submitted to dbEST division of GenBank (accession numbers EE724403 to EE730376; released September 2006).

2. **Ralph S**, Cooper D, Kolosova N, Oddy C, Butterfield Y, Kirkpatrick R, Liu J, Palmquist D, Stott J, Barber S, Yang G, Babakaiff R, Brown-John M, Chand S, Featherstone R, Masson A, Mayo M, Moran J, Olson T, Wong D, Ritland CE, Siddiqui A, Holt R, Jones S, Marra M, Ellis BE, Douglas C, Ritland K, Bohlmann J (2004/2005) Genomics of hybrid poplar (*Populus trichocarpa x deltoides*) interacting with forest tent caterpillars (*Malacosoma disstria*): Normalized and full-length cDNA libraries, expressed sequence tags (ESTs), and a cDNA microarray for the study of insect-induced defenses in poplar; 116,369 ESTs submitted to dbEST division of GenBank (accession numbers CV225307 to CV284047, released September 2004; DT469172 to DT526799, released August 2005).

1. **Ralph S**, Kolosova N, Oddy C, Cooper D, Butterfield Y, Kirkpatrick R, Liu J, Palmquist D, Stott J, Barber S, Yang G, Babakaiff R, Brown-John M, Chand S, Featherstone R, Masson A, Mayo M, Moran J, Olson T, Wong D, Friedmann MF, Ritland CE, Siddiqui A, Holt R, Jones S, Marra M, Ellis BE, Douglas C, Ritland K, Bohlmann J (2004/2005) The spruce transcriptome: Analysis of expressed sequence tags from multiple cDNA libraries; 184,378 ESTs submitted to dbEST division of GenBank (accession numbers CN480886 to CN480910, released April 2004; CO203067 to CO245079, CO250245 to CO252887, CO252989 to CO253183, CO253265 to CO257405, and CO257513 to CO258618, released June 2004; CV720218 to CV720219, released November 2004; DR448912 to DR451924, and DR463975 to DR595214, released July 2005).

Microarray data submissions to the Gene Expression Omnibus of NCBI

Total microarray platform submissions: 2

Total microarray sample submissions: 166

10. **Ralph SG**, Philippe RN, Bohlmann J, Hybrid poplar H11-11 leaves exposed to a variety of stress treatments including *Malacosoma disstria* herbivory, mechanical wounding, wounding plus the application of insect oral secretions, and methyl jasmonate; spotted cDNA data series number GSE14081 consisting of 16 hybridizations; immediate release pending GEO approval.

9. **Ralph SG**, Philippe RN, Bohlmann J, Hybrid poplar H11-11 leaves exposed to methyl jasmonate; spotted cDNA data series number GSE14039 consisting of 18 hybridizations; immediate release pending GEO approval.

8. **Ralph SG**, Philippe RN, Bohlmann J, Hybrid poplar H11-11 leaves exposed to a variety of stress treatments including *Malacosoma disstria* herbivory, mechanical wounding, and wounding plus the application of insect oral secretions; spotted cDNA data series number GSE13767 consisting of 54 hybridizations; immediate release pending GEO approval.

7. **Ralph SG** and Bohlmann J (2008) Sitka spruce FB3-425 bark exposed to *Pissodes strobi* insect herbivory; spotted cDNA data series number GSE8378 consisting of eight hybridizations; released July 2008.

6. **Ralph SG** and Bohlmann J (2008) Sitka spruce FB3-425 untreated control bark used in self-self hybridizations to evaluate the performance of a new 21.8K cDNA microarray; spotted cDNA data series number GSE8363 consisting of four hybridizations; released June 2008.

5. **Ralph SG**, Lippert D, Phillips MA, Gershenzon J, White R, Borchers C, Bohlmann J (2008) Norway spruce cultured cells exposed to chitosan and *Ceratocystis polonica*; spotted cDNA data series number GSE10771 consisting of 24 hybridizations; released June 2008.

Microarray data submissions to the Gene Expression Omnibus of NCBI (continued)

4. Holliday JA, **Ralph SG**, White R, Bohlmann J, Aitken SN (2008) Global monitoring of autumn gene expression within and among populations of Sitka spruce; spotted cDNA data series number GSE8370 consisting of 32 hybridizations; released June 2008.

3. **Ralph SG** and Bohlmann J (2008) Hybrid poplar H11-11 leaves exposed to *Malacosoma disstria* insect herbivory; spotted cDNA data series number GSE9522 consisting of 10 hybridizations; released April 2008.

2. **Ralph SG** and Bohlmann J (2007) Treenomix 21.8K spruce cDNA microarray; spotted cDNA platform description number GPL5423; released October 2007.

1. **Ralph SG**, Oddy C, Cooper D, Yueh H, Jancsik S, Kolosova N, Philippe RN, Aeschliman D, White R, Huber D, Ritland CE, Benoit F, Rigby T, Nantel A, Butterfield YS, Kirkpatrick R, Chun E, Liu J, Palmquist D, Wynhoven B, Stott J, Yang G, Barber S, Holt RA, Siddiqui A, Jones SJ, Marra MA, Ellis BE, Douglas CJ, Ritland K, Bohlmann J (2007) Treenomix poplar 15.5K cDNA microarray; spotted cDNA platform description number GPL5921; released October 2007.

Abstracts and conference presentations

Total abstracts and conference presentations: 103

Invited presentations: 12

Presenting author: 36

International conferences: 50

National conferences: 16

Regional conferences: 15

Institutional or department seminars: 22

Invited presentation or symposium speaker

Presenting author(s) underlined

12. Ralph SG (September 7, 2007) Exploring poplar defenses against defoliating insects using an integrated genomic and proteomic strategy. Plant Pathology Dept., North Dakota State University, Fargo, USA (department seminar).

11. Ralph SG (December 7, 2006) Forest tree defenses against insects: Functional genomics, biochemistry and cell biology. Biology Dept., University of North Dakota, Grand Forks, USA (department seminar).

10. Ralph SG (December 4, 2006) Poplar as a model for angiosperm tree biology: Investigating plant-insect interactions and the impact of domestication using functional genomics approaches. Dept. of Natural Resources and Environmental Sciences, University of Illinois, Champaign, USA (department seminar).

9. Ralph S, Hudgins JW, Bohlmann J (April 9, 2006) Conifer defense: Genomics, biochemistry, and cell biology. Dept. of Biochemistry, Max Planck Institute for Chemical Ecology, Jena, Germany (department seminar).

8. Ralph S and Hudgins JW (April 3, 2006) Functional genomics approaches to characterize the contribution of phenolic secondary metabolites to insect induced defenses in conifer trees. Dept. of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, Umeå, Sweden (department seminar).

7. Ralph S (January 23, 2006) Characterization of insect induced defenses in spruce and poplar using functional genomics approaches. Dept. of Genetics and Biochemistry, Clemson University, Clemson, USA (department seminar).

Invited presentation or symposium speaker (continued)

6. **Ralph S** (August 8, 2005) Functional genomics in spruce and poplar: Towards understanding plant-insect interactions. Dept. of Biological Sciences, University of Calgary, Calgary, Canada (department seminar).
5. **Ralph S** (March 17-18, 2005) Large-scale transcript profiling using spruce and poplar cDNA microarrays: Towards understanding plant-herbivore interactions. 4th Montreal Microarray Symposium, Montreal, Canada (national conference).
4. **Ralph S**, Yueh H, Philippe R, Aeschliman D, Miranda M, Constabel P, Jancsik S, Oddy C, Rueffer K, Friedmann M, Ritland C, Nantel A, Rigby T, Butterfield Y, Kirkpatrick R, Stott J, Yang G, Siddiqui A, Jones S, Marra M, Ellis B, Ritland K, Douglas C, Bohlmann J (October 10-13, 2004) Functional genomics in *Populus*: Towards understanding plant-herbivore interactions. 12th *New Phytologist* Symposium, Functional Genomics of Environmental Adaptation in *Populus*, Gatlinburg, USA (international conference).
3. **Ralph S**, Rungis D, Lippert D, Friedmann M, Zhuang J, Kelleher C, Aeschliman D, Kolosova N, Cooper D, Mattheus N, Oddy C, Jancsik S, Bérubé Y, Ritland C, Olafson R, Jones S, Marra M, Nelson C, Douglas C, Ellis BE, Ritland K, Bohlmann J (July 28-31, 2003) Deciphering the spruce and poplar genomes: Physical, functional and comparative genomics. 48th Western Forest Genetics Association annual meeting, Whistler, Canada (regional conference).
2. Bohlmann J (March 31 to April 4, 2003) Functional genomics of terpenoid defenses in spruce. Society of Experimental Biology annual meeting, Southampton, United Kingdom (presented by **Ralph S**; international conference).
1. **Ralph S**, Pahl A, Ling V (October 24-28, 2000) Profiling of ABC transporters in normal and malignant tissues. 10th North American International Society for the Study of Xenobiotics meeting, Indianapolis, USA (international conference).

Other abstracts and conference presentations

Presenting author(s) underlined

91. Brunelle DC, Dassinger HB, Grant AD, Bertrand DC, **Ralph SG** (April 28, 2009) Using forward genetics to identify novel insect resistance genes in poplar trees. McNair Forum (institutional conference, oral presentation).
90. Dassinger HB, Plett J, Bertrand DC, Grant AD, Regan S, **Ralph SG** (April 16, 2009) A genetic screen for the discovery of insect resistant genes in poplar trees. Northern Plains Biological Symposium (regional conference, oral presentation).
89. Brunelle DC, Bertrand DC, Dassinger HB, Grant AD, **Ralph SG** (March 11, 2009) Using forward genetics to identify novel insect resistance genes in poplar trees. UND Graduate School Scholarly Forum (institutional conference, poster presentation).
88. Burum JD and **Ralph SG** (March 11, 2009) Investigating the role of cell membrane receptors in detecting insect herbivory. UND Graduate School Scholarly Forum (institutional conference, oral presentation).
87. Bertrand DC and **Ralph SG** (September 19, 2008) A genetic screen for the discovery of insect susceptibility genes in poplar trees. North Dakota EPSCoR State Conference (regional conference, poster presentation).
86. Burum JD and **Ralph SG** (September 19, 2008) Investigating the role of cell membrane receptors in plant defenses against feeding insects. North Dakota EPSCoR State Conference (regional conference, poster presentation).

Other abstracts and conference presentations (continued)

85. Dassinger HB and **Ralph SG** (September 19, 2008) A genetic screen for the discovery of insect resistance genes in poplar trees. North Dakota EPSCoR State Conference (regional conference, poster presentation).
84. Keeling CI, Weiβhaar S, Dullat HK, **Ralph SG**, Jancsik S, Lin RPC, Bohlmann J (July 30 to August 3, 2008) The conifer terpene synthase gene family. Banff Conference on Plant Metabolism, Calgary, Canada (international conference, oral presentation).
83. Bohlmann J, Breuil C, Diguistini S, Hamberger B, Keeling CI, Lippert D, Ohnishi T, **Ralph S**, Reid K (June 8-12, 2008) Conifer defence and biomaterials: The role of terpenoid synthases and cytochrome P450s in diterpene resin acid biosynthesis and diversification of oleoresin terpenoids. 9th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Nice, France (international conference, oral presentation).
82. **Ralph SG** and Jancsik SI (April 11, 2008) Improvement of insect resistance in poplar trees using activation tagged forward genetics. 5th Annual Northern Plains Biological Symposium, Fargo, USA (regional conference, oral presentation).
81. Holliday JA, **Ralph S**, Bohlmann J, Ritland K, Aitken S (January 12-18, 2008) Genomics of adaptation to local climate in Sitka spruce. Plant and Animal Genomes XVI, San Diego, USA (international conference, oral presentation).
80. **Ralph SG**, Lippert D, Philippe RN, Jancsik S, White R, Bohlmann J (September 7, 2007) Exploring poplar defenses against defoliating insects using an integrated genomic and proteomic strategy. ND/SD EPSCoR 6th Biennial Joint Conference, Fargo, USA (regional conference, poster presentation).
79. Reid K, **Ralph S**, Chun E, Liao N, Ali J, Ritland K, Bohlmann J (July 30 to August 2, 2007) Gene discovery in the Treenomix conifer forest health EST and FLcDNA project. 5th Canadian Plant Genomics Workshop, Vancouver, Canada (national conference, poster presentation).
78. Holliday J, **Ralph S**, Bohlmann J, Aitken S (July 30 to August 2, 2007) Genomics of adaptation to local climate in Sitka spruce. 5th Canadian Plant Genomics Workshop, Vancouver, Canada (national conference, poster presentation).
77. Holliday J, **Ralph S**, Bohlmann J, Aitken S (July 30 to August 2, 2007) Functional and population genomics of adaptation to local climate in Sitka spruce. 5th Canadian Plant Genomics Workshop, Vancouver, Canada (national conference, oral presentation).
76. **Ralph SG** (June 12, 2007) Development and application of genomic resources to investigate induced defenses in conifer trees. 2nd annual Treenomix Conifer Forest Health Workshop, Vancouver, Canada (institutional conference, oral presentation).
75. Douglas CJ, Friedmann M, Hamberger B, De Azevedo Souza C, Li E, Qiang W, Johnson L, Ellis M, White R, **Ralph S**, Savidge R, Ellis B (June 3-8, 2007) Comparative genomics of phenylpropanoid metabolism and xylem development in poplar, spruce and *Arabidopsis*. IUFRO Tree Biotechnology 2007, Ponta Delgada, Azores, Portugal (international conference, oral presentation).
74. Kolosova N, **Ralph S**, Breuil C, Ritland K, Bohlmann J (June 3-8, 2007) Conifer defense against bark beetle-associated blue-stain fungi and white pine weevil. IUFRO Tree Biotechnology 2007, Ponta Delgada, Azores, Portugal (international conference, oral presentation).
73. Philippe RN, **Ralph S**, Jancsik S, White R, Bohlmann J (February 18-23, 2007) Genomics of hybrid poplar (*P. deltoides* x *trichocarpa*) defense response to herbivorous insects. 10th Gordon Research Conference on Plant Herbivore Interaction, Ventura, USA (international conference, poster presentation).

Other abstracts and conference presentations (continued)

72. Külheim C, Lippert D, Philippe R, **Ralph S**, Bohlmann J (February 18-23, 2007) A proteome analysis of poplar-herbivore interactions. 10th Gordon Research Conference on Plant Herbivore Interaction, Ventura, USA (international conference, poster presentation).

71. Chun HJE, **Ralph SG**, Cooper D, Kirkpatrick R, Palmquist D, Wynhoven B, Kolosova N, Oddy C, Jancsik S, Douglas CJ, Yang G, Holt RA, Jones SJM, Marra MA, Ritland K, Bohlmann J (February 7-10, 2007) The poplar transcriptome: Analysis of 4,664 sequence-verified full-length cDNAs. 8th Advances in Genome Biology and Technology Conference, Marco Island, USA (international conference, poster presentation).

70. Lippert D, Phillips M, Keeling C, **Ralph S**, Gershenzon J, Bohlmann J (January 13-17, 2007) Using targeted proteomics to improve our understanding of conifer defense biology. Plant and Animal Genomes XV, San Diego, USA (international conference, oral presentation).

69. Holliday J, **Ralph S**, Bohlmann J, Aitken SN (October 1-6, 2006) Temporal monitoring of autumn gene expression within and among populations of Sitka spruce reveals candidate genes for adaptation to local climate. IUFRO Working Group on Population, Ecological and Conservation Genetics, Madrid, Spain (international conference, oral presentation).

68. **Ralph S** (September 21, 2006) Expressed spruce genome and functions in conifer defense: Gene discovery resources. 1st annual Treenomix Conifer Forest Health Workshop, Vancouver, Canada (institutional conference, oral presentation).

67. **Ralph S** (September 21, 2006) Expressed spruce genome and functions in conifer defense: Phenolic defenses. 1st annual Treenomix Conifer Forest Health Workshop, Vancouver, Canada (institutional conference, oral presentation).

66. Lippert D, Chowrira S, **Ralph SG**, Aeschliman D, Zhuang J, Ritland C, Ritland K, Bohlmann J (September 3-7, 2006) Conifer defense against insects: Proteome analysis of Sitka spruce (*Picea sitchensis*) induced by mechanical wounding or feeding by white pine weevils (*Pissodes strobi*). 7th Siena Meeting from Genome to Proteome: Back to the Future, Siena, Italy (international conference, poster presentation).

65. Külheim C, Philippe RN, **Ralph S**, Lippert D, Bohlmann J (August 20-25, 2006) Tree-insect herbivore interactions – a “gift” from the plant. 8th International Congress of Plant Molecular Biology, Adelaide, Australia (international conference, poster presentation).

64. **Ralph SG**, Hudgins JW, Jancsik S, Madilao LL, Bohlmann J (July 8-12, 2006) Functional genomics approaches to characterize the contribution of phenolic secondary metabolites to insect induced defenses in conifer trees. 41st Annual meeting of the Phytochemical Society of North America, Oxford, USA (international conference, oral presentation, Neish Award lecture) .

63. Holliday J, **Ralph S**, Bohlmann J, Aitken S (June 26-29, 2006) Integrating population, quantitative and molecular genetics: adaptive variation in cold tolerance in Sitka spruce (*Picea sitchensis*). 51st Western Forest Genetics Association annual meeting, Anchorage, USA (regional conference, oral presentation).

62. Kolosova N, **Ralph S**, Zhuang J, Breuil C, Bohlmann J (June 19-22, 2006) Discovery of the dynamics of lodgepole pine transcriptional response to mountain pine beetle-vectored fungus (*Ophiostoma clavigerum*) using interspecies application of genomics tools. 4th Canadian Plant Genomics Workshop, Ottawa, Canada (national conference, poster presentation).

61. Hudgins JW, **Ralph SG**, Jancsik S, Madilao LL, Bohlmann J (June 9-10, 2006) Functional genomics approaches to characterize the contribution of phenolic secondary metabolites to insect induced defenses in conifer trees. International Symposium in Memory of Vincent R. Franceschi, Pullman, USA (international conference, oral presentation).

Other abstracts and conference presentations (continued)

60. Philippe RN, **Ralph SG**, Jancsik S, Aeschliman D, White R, Bohlmann J (April 7, 2006) Genomics of hybrid poplar (*Populus trichocarpa x deltoides*) interacting with forest tent caterpillars (*Malacosoma disstria*): Contrasting local and systemic responses to insect attack. 4th annual Genome British Columbia Forum, Vancouver, Canada (institutional conference, poster presentation).

59. Holliday J, **Ralph S**, Bohlmann J, Aitken (April 7, 2006) Functional and population genomics of cold tolerance in Sitka spruce (*Picea sitchensis*). 4th annual Genome British Columbia Forum, Vancouver, Canada (institutional conference, poster presentation).

58. **Ralph S**, Yueh H, Jancsik S, Oddy C, Ritland C, White R, Kirkpatrick R, Wynhoven B, Chun E, Palmquist D, Siddiqui A, Jones S, Marra M, Ritland K, Bohlmann J (January 14-18, 2006) Characterization of insect induced defenses in spruce using functional genomics approaches. Plant and Animal Genomes XIV, San Diego, USA (international conference, oral presentation).

57. Ritland K, Zhuang J, **Ralph S**, Ritland C, Bohlmann J (January 14-18, 2006) Comparative conifer genomics and the new "Treenomix" program. Plant and Animal Genomes XIV, San Diego, USA (international conference, oral presentation).

56. Lippert D, Chowrira S, **Ralph S**, Ehltling J, Bohlmann J (November 6-11, 2005) The intricacies and incentives of high-throughput proteomics in its application to tree biology. IUFRO Tree Biotechnology 2005, Pretoria, South Africa (international conference, oral presentation).

55. Harris N, Cottrell J, Lee S, **Ralph S**, Bohlmann J, Jancsik S, Stewart D, Taylor G (November 6-11, 2005) Elucidating the genetic nature of wood quality in Sitka spruce – from microarray to field. IUFRO Tree Biotechnology 2005, Pretoria, South Africa (international conference, poster presentation).

54. Holliday JA, **Ralph S**, Aitken SN (November 6-11, 2005) Functional and population genomics of cold acclimation in *Picea sitchensis*. IUFRO Tree Biotechnology 2005, Pretoria, South Africa (international conference, oral presentation).

53. **Ralph S**, Yueh H, Rueffer K, Leung G, Jancsik S, Kolosova N, Ritland K, Bohlmann J (August 28-31, 2005) Transcriptional response of weevil induced defenses in Sitka spruce. 3rd Canadian Plant Genomics Workshop, Saskatoon, Canada (national conference, oral presentation).

52. Miranda M, **Ralph S**, Bohlmann J, Constabel CP (August 28-31, 2005) The transcriptional response of hybrid poplar to infection by *Melampsora* leaf rust. 3rd Canadian Plant Genomics Workshop, Saskatoon, Canada (national conference, oral presentation).

51. Lane AW, **Ralph S**, Bohlmann J, Ellis B (July 16-20, 2005) Heterologous hybridization of *Picea* microarrays. American Society of Plant Biology annual meeting, Seattle, USA (international conference, poster).

50. Kolosova N, **Ralph S**, Breuil C, Bohlmann J (July 11-14, 2005) Genomics discovery of lodgepole pine defense mechanisms against the mountain pine beetle-vectored fungal pathogen (*Ophiostoma clavigerum*). IUFRO Forest Insect Epidemics, Prince George, Canada (regional conference, oral presentation).

49. **Ralph S**, Philippe RN, Jancsik S, Bohlmann J (June 15-18, 2005) Exploring large-scale transcriptional responses in hybrid poplar to herbivory by forest tent caterpillars: Genome organization, cDNA cloning and gene expression of a Kunitz trypsin inhibitor family. Plant Canada 2005, Edmonton, Canada (national conference, oral presentation).

48. Kolosova N, **Ralph S**, Bohlmann J (June 15-18, 2005) Genomics discovery of lodgepole pine defense mechanisms against the mountain pine beetle-vectored fungal pathogen (*Ophiostoma clavigerum*) and evaluation of a new conifer microarray chip for gene expression profiling across the pine family. Plant Canada 2005, Edmonton, Canada (national conference, oral presentation).

Other abstracts and conference presentations (continued)

47. **Ralph S** (April 12, 2005) Exploring large-scale transcriptional responses in hybrid poplar to herbivory by forest tent caterpillars: Genome organization, cDNA cloning and gene expression of a Kunitz trypsin inhibitor family. Michael Smith Laboratories Colloquium, Vancouver, Canada (institutional conference, oral presentation).
46. **Philippe RN, Ralph SG**, Jancsik S, Bohlmann J (March 4, 2005) cDNA microarrays reveal the importance of Kunitz protease inhibitors to *Populus* herbivory defence. Botany Graduate Students' Symposium, University of British Columbia, Vancouver, Canada (institutional conference, oral presentation).
45. **Bohlmann J**, Aeschliman D, Arimura G, Chowrira G, Douglas C, Ellis B, Huber D, Jancsik S, Keeling C, Kolosova N, Lippert D, Madilao L, Martin D, Miller B, Oddy C, Philippe R, **Ralph S**, Ritland C, Ritland K, Ro DK, Roberts J, Yueh H (January 15-19, 2005) Forest health genomics: Insect-induced defenses in spruce and poplar. Plant and Animal Genomes XIII, San Diego, USA (international conference, oral presentation).
44. **Douglas CJ, Ralph S**, Friedmann M, Kelleher C, Lippert D, Chowrira G, Ehling J, Aeschliman D, Ellis M, Zhuang J, Ritland K, Bohlmann J (January 15-19, 2005) Comparative genomics of fiber development and response to herbivory in poplar and Arabidopsis. Plant and Animal Genomes XIII, San Diego, USA (international conference, oral presentation).
43. **Ralph S**, Rungis D, Chowrira G, Lippert D, Aeschliman D, Yueh H, Jancsik S, Oddy C, Rueffer K, Friedmann M, Bérubé Y, Zhuang J, Ritland C, Cullis I, Zeznik J, Nelson C, Nantel A, Rigby T, Butterfield Y, Kirkpatrick R, Stott J, Yang G, Siddiqui A, Jones S, Marra M, Olafson R, Mansfield S, Ellis B, Ritland K, Douglas C, Bohlmann J (October 10-13, 2004) The Treenomix project: A multifaceted approach to insect herbivory in spruce and poplar. 12th *New Phytologist* Symposium, Functional Genomics of Environmental Adaptation in *Populus*, Gatlinburg, USA (international conference, poster).
42. **Philippe RN, Ralph S**, Jancsik S, Bohlmann J (October 10-13, 2004) Quantitative expression of Kunitz-type protease inhibitors in *Malacosoma disstria*-attacked poplar: A microarray and real-time PCR approach. 12th *New Phytologist* Symposium, Functional Genomics of Environmental Adaptation in *Populus*, Gatlinburg, USA (international conference, poster).
41. **Ritland K**, Zhuang J, **Ralph S**, Douglas C, Ellis BE, Bohlmann J (September 13-17, 2004) Patterns of nucleotide variation for ESTs in conifer and angiosperm tree taxa. Population, Evolutionary and Ecological Genomics of Forest Trees, Pacific Grove, USA (international conference, oral presentation).
40. **Rungis D**, Zhuang J, Bérubé Y, Wilkin J, **Ralph S**, Douglas C, Ellis BE, Bohlmann J, Ritland K (September 13-17, 2004) Development of EST-based DNA markers in *Picea*. Population, Evolutionary and Ecological Genomics of Forest Trees, Pacific Grove, USA (international conference, oral presentation).
39. **Yu J**, Meng Y, Taniguchi M, Hansen C, **Ralph S**, Bohlmann J, Moore SS (September 11-16, 2004) Full-length bovine cDNA libraries: A development of library construction strategies. 29th International Conference on Animal Genetics, Tokyo, Japan (international conference, poster).
38. **Bohlmann J**, Lücker J, Martin D, Miller B, **Ralph S**, Ro DK (August 22-26, 2004) Mining plant genomes for terpenoid pathway enzymes. 228th American Chemical Society annual meeting, Philadelphia, USA (international conference, oral presentation).
37. **Ralph S** (August 8-11, 2004) Functional genomics in *Picea* and *Populus*: Towards understanding plant-herbivore interactions. 2nd annual Genome British Columbia Forest Genomics Workshop at the Poplar Council of Canada annual meeting, Vancouver, Canada (national conference, oral presentation).
36. **Bohlmann J**, Arimura GI, Fäldt J, Godard K, Huber D, Kolosova N, Martin DM, Miller B, Philippe R, **Ralph S**, Ro DK, Robert J (July 24-28, 2004) Biochemistry and functional genomics of herbivore-induced defenses in spruce and poplar. Joint conference; 20th annual meeting of the International Society of Chemical Ecology and the 44th annual meeting of the Phytochemical Society of North America, Ottawa, Canada (international conference, oral presentation).

Other abstracts and conference presentations (continued)

35. Yu J, Meng Y, Taniguchi M, Hansen C, **Ralph S**, Bohlmann J, Moore SS (July 20-23, 2004) Full-length bovine cDNA library construction. Canadian Society of Animal Science, Edmonton, Canada (national conference, poster).
34. Bohlmann J, **Ralph S**, Kelleher C, Yueh H, Jancsik S, Oddy C, Marra M, Schein J, Holt R, Jones S, Siddiqui A, Butterfield Y, Kirkpatrick R, Ritland C, Douglas C, Ellis BE, Ritland K (May 13-14, 2004) Canada's contribution to the international poplar genome sequencing project and mining for insect-defense genes in the poplar genome. Understanding Poplar: From Genes to Functions. Poplar Symposium sponsored by the German Science Foundation, Göttingen, Germany (international conference, oral presentation).
33. Kirkpatrick R, **Ralph S**, Liu J, Palmquist D, Butterfield Y, Stott J, Babakaiff R, Barber S, Brown-John M, Chand S, Cloutier A, Featherstone R, Girn N, Lee D, Masson A, Mayo M, Moran J, Olson T, Prabhu A, Tsai M, Yang G, Cooper D, Gunter L, Tuskan J, Bohlmann J, Ritland K, Ellis B, Douglas C, Siddiqui A, Holt R, Jones S, Marra M (May 12-16, 2004) Gene discovery in poplar. The Biology of Genomes Conference, Cold Spring Harbor, New York, USA (international conference, poster).
32. Oddy C, Jancsik S, Yueh H, Rueffer K, **Ralph S**, Aeschliman D, Ritland C, Kolosova N, Friedmann M, Stott J, Yang G, Holt R, Butterfield Y, Kirkpatrick R, Liu J, Palmquist D, Siddiqui A, Jones S, Marra M, Nelson C, Tessier D, Douglas C, Ellis B, Ritland K, Bohlmann J (March 26, 2004) Functional genomics in spruce and poplar: Towards understanding plant-herbivore interactions. 2nd annual Genome British Columbia Forum, Vancouver, Canada (institutional conference, poster).
31. Rungis D, Bérubé Y, Zhuang J, **Ralph S**, Ellis BE, Douglas C, Bohlmann J, Ritland K (January 10-14, 2004) Development and mapping of EST-SSRs and SNPs in spruce. Plant and Animal Genomes XII, San Diego, USA (international conference, oral presentation).
30. Rungis D, Zhuang J, Bérubé Y, **Ralph S**, Kolosova N, Cooper D, Mattheus N, Oddy C, Ritland C, Jones S, Marra M, Douglas C, Ellis B, Bohlmann J, Ritland K (January 10-14, 2004) Comparative genomics of EST-SSR markers and demonstration of their use in spruce. Plant and Animal Genomes XII, San Diego, USA (international conference, poster).
29. Lippert DN, Chowrira G, Arimura G, **Ralph S**, Friedmann M, Olafson B, Ritland K, Douglas C, Ellis B, Bohlmann J (October 8-11, 2003) Analysis of herbivore response mechanisms in a variety of plant species. 2nd annual Human Proteome Organization & International Union of Biochemistry and Molecular Biology Joint World Congress, Montreal, Canada (international conference, poster).
28. Bohlmann J, Arimura GI, Faldt J, Godard KA, Gretes M, Huber DPW, Martin DM, Martz S, Miller B, Philippe RN, **Ralph SG**, Ro DK (August 23-26, 2003) Biology and genomics of herbivore-induced stress response in forest trees. 1st Canadian Plant Genomics Workshop, Saskatoon, Canada (national conference, oral presentation).
27. **Ralph S**, Cooper D, Kolosova N, Mattheus N, Oddy C (July 28-31, 2003) Spruce and poplar libraries, EST database and full-length cDNAs. 1st annual Genome British Columbia Forest Genomics Workshop at the 48th Western Forest Genetics Association annual meeting, Whistler, Canada (regional conference, oral presentation).
26. Friedmann M and **Ralph S** (July 28-31, 2003) Spruce and poplar microarrays: Development and applications. 1st annual Genome British Columbia Forest Genomics Workshop at the 48th Western Forest Genetics Association annual meeting, Whistler, Canada (regional conference, oral presentation).
25. Zhuang J, Rungis D, Bérubé Y, **Ralph S**, Kolosova N, Cooper D, Mattheus N, Oddy C, Ritland C, Jones S, Marra M, Douglas C, Ellis BE, Ritland K, Bohlmann J (July 28-31, 2003) Development of bioinformatics tools for the analysis of EST databases. 48th Western Forest Genetics Association annual meeting, Whistler, Canada (regional conference, poster).

Other abstracts and conference presentations (continued)

24. Rungis D, Bérubé Y, Zhuang J, **Ralph S**, Kolosova N, Cooper D, Mattheus N, Oddy C, Ritland C, Jones S, Marra M, Douglas C, Ellis BE, Ritland K, Bohlmann J (July 28-31, 2003) Development of SSR markers in *Picea*. 48th Western Forest Genetics Association annual meeting, Whistler, Canada (regional conference, poster).

23. Bohlmann J, Arimura G, Fäldt J, Godard K, Gretes M, Huber D, Martin D, Martz S, Miller B, Philippe R, **Ralph S**, Ro D (July 28-31, 2003) Functional genomics in spruces and poplars: A case study on terpenoids, volatile emissions, direct and indirect defense. 48th Western Forest Genetics Association annual meeting, Whistler, Canada (regional conference, oral presentation).

22. **Ralph S**, Rungis D, Lippert D, Friedmann M, Zhuang J, Kolosova N, Cooper D, Mattheus N, Bérubé Y, Ritland C, Olafson R, Jones S, Marra M, Nelson C, Douglas C, Ellis BE, Ritland K, Bohlmann J (June 7-12, 2003) Deciphering the spruce genome: Tools for functional genomics and genome-wide marker development. Tree Biotechnology 2003, Umeå, Sweden (international conference, oral presentation).

21. **Ralph S**, Friedmann M, Kolosova N, Cooper D, Mattheus N, Oddy C, Zhuang J, Ritland C, Aeschliman D, Jones S, Marra M, Nelson C, Douglas C, Ellis BE, Ritland K, Bohlmann J (June 7-12, 2003) Functional genomics in spruce and poplar: Towards understanding plant-herbivore interactions. IUFRO Tree Biotechnology 2003, Umeå, Sweden (international conference, poster).

20. Douglas C, Ehltng J, Gilchrist E, **Ralph S**, Lippert D, Friedmann M, Zhuang J, Kolosova N, Cooper D, Mattheus N, Ritland C, Savidge R, Haughn G, Olafson R, Schein J, Jones S, Marra M, Nelson C, Bohlmann J, Ellis B, Ritland K (June 7-12, 2003) Genomics approaches to wood development and phenylpropanoid metabolism. IUFRO Tree Biotechnology 2003, Umeå, Sweden (international conference, oral presentation).

19. Bohlmann J, Godard K, Huber D, Martin D, Miller B, Philippe R, **Ralph S**, Ro D (June 7-12, 2003) Terpenoid biochemistry and gene discovery in conifers. IUFRO Tree Biotechnology 2003, Umeå, Sweden (international conference, oral presentation).

18. **Ralph S**, Kolosova N, Zhuang J, Cooper D, Butterfield Y, Kirkpatrick R, Ritland C, Bosdet I, Mathewson C, Wye N, Stott J, Yang G, Smailus D, Asano J, Barber S, Chan S, Chiu R, Cloutier A, Fjell C, Flibotte S, Girn N, Guin R, Leach S, Lee D, Lee S, Olson T, Pandoh P, Prabhu A, Saeedi P, Shin H, Spence L, Tsai M, Schein J, Jones S, Marra M, Nelson C, Douglas C, Ellis B, Ritland K, Bohlmann J (January 11-15, 2003) Structural and functional approaches to deciphering the spruce and poplar genomes. Plant and Animal Genomes XI, San Diego, USA (international conference, oral presentation).

17. **Ralph S**, Kolosova N, Zhuang J, Cooper D, Butterfield Y, Kirkpatrick R, Ritland C, Bosdet I, Mathewson C, Wye N, Stott J, Yang G, Smailus D, Asano J, Barber S, Chan S, Chiu R, Cloutier A, Fjell C, Flibotte S, Girn N, Guin R, Leach S, Lee D, Lee S, Olson T, Pandoh P, Prabhu A, Saeedi P, Shin H, Spence L, Tsai M, Schein J, Jones S, Marra M, Nelson C, Douglas C, Ellis B, Ritland K, Bohlmann J (September 29 to October 2, 2002) Structural and functional approaches to deciphering the spruce and poplar genomes. 1st Plant Genomics European Meeting, Berlin, Germany (international conference, poster).

16. **Ralph S**, Kolosova N, Douglas C, Ellis B, Jones S, Ritland K, Marra M, Bohlmann J (June 8-12, 2002) Development of an inventory of expressed sequence tags in spruce and poplar. Canadian Society of Plant Physiologists annual meeting, Calgary, Canada (national conference, oral presentation).

15. Guan Y, **Ralph S**, Ling V, Hogge D (December 7-11, 2001) Polyclonal normal hematopoietic progenitors in patients with acute myeloid leukemia (AML). 43rd American Society of Hematology Meeting, Orlando, USA (international conference, poster).

14. Sheps J, **Ralph S**, Baillie D, Ling V (July 14-19, 2001) The ABC transporter gene family in eukaryotic genomes. Transport ATPases: From Genomics to Mechanism, 2001 FASEB Summer Research Conference, Snowmass, Colorado, USA (international conference, poster).

Other abstracts and conference presentations (continued)

13. **Ralph S**, Ishkanian A, Mallof C, Garnis C, Kasteel K, Ling V, Marra M, Lam W (May 11, 2001) Genome-wide analysis of DNA copy number changes using BAC arrays. Pathology Day Gala, Centre for Molecular Medicine & Therapeutics, Vancouver, Canada (institutional conference, poster).
12. **Pahl A, Ralph S**, Ling V (March 3-10, 2001) RNA expression profiles of the human ABC transporter family in human tissues, MDR cancer cell lines and after short-term exposure to chemotherapeutic drugs. 3rd FEBS Advanced Lecture Course: ATP Binding Cassette Transporters, Gosau, Austria (international conference, oral presentation).
11. **Ralph S**, Pahl A, Ling V (November 3-4, 2000) RNA expression profiling of the human ABC transporter family in multidrug-resistant cell lines and normal tissues. UBC Faculty of Medicine Golden Jubilee, Vancouver, Canada (institutional conference, poster).
10. **Pahl A, Ralph S**, Ling V (November 3-4, 2000) RNA expression profiles of the ABC transporter family after short-term exposure to chemotherapeutic drugs in the human HL-60 leukemic cell line. UBC Faculty of Medicine Golden Jubilee, Vancouver, Canada (institutional conference, poster).
9. **Siwoski A**, Ishkanian A, Mallof C, **Ralph S**, Lam W (November 3-4, 2000) High resolution genome scanning of minute specimens. UBC Faculty of Medicine Golden Jubilee, Vancouver, Canada (institutional conference, poster).
8. **Hung JY**, Cheng JS, **Ralph S**, English J, Ling V (September 11-15, 2000) Quantification of MDR1, MRP1, and GST- π gene expression levels in smokers with and without bronchial dysplasia or cancer. 9th World Conference on Lung Cancer, Tokyo, Japan (international conference, poster).
7. **Siwoski A**, Ishkanian A, Mallof C, **Ralph S**, Lam W (May 31 to June 2, 2000) Genome wide scanning of minute specimens: High resolution DNA fingerprinting. 6th Bridging the Strait of Georgia Conference, Victoria, Canada (regional conference, poster).
6. **Ralph S**, Pahl A, Ling V (April 1-5, 2000) mRNA expression analysis of the ABC transporter family in multidrug resistant cancer cell lines using a quantitative-competitive-RT-PCR assay. 91st Annual Meeting of the American Association for Cancer Research, San Francisco, USA (international conference, poster).
5. **Pahl A, Ralph S**, Ling V (September 1-3, 1999) Global mRNA expression analysis of ABC transporters in multidrug resistant cancer using a quantitative-competitive-RT-PCR assay. 5th Bridging the Strait of Georgia Conference, Victoria, Canada (regional conference, poster).
4. **Ralph S** and Ling V (February 20-27, 1999) Global expression analysis of the ABC superfamily using a quantitative-competitive-RT-PCR assay. 2nd FEBS Advanced Lecture Course: ATP Binding Cassette Transporters, Gosau, Austria (international conference, poster).
3. **Ralph S** and Ling V (April 2-5, 1998) Global expression analysis of the ABC superfamily using a quantitative-competitive-RT-PCR assay. Membrane Proteins in Health and Disease, 8th Fisher Winternational Symposium on Cellular and Molecular Biology, Banff, Canada (national conference, poster).
2. **Ralph S** and Petras M (March 12-16, 1995) Monitoring small bodies of water with single cell gel DNA electrophoresis (SCDE) in tadpoles. 26th Environmental Mutagen Society Annual Meeting, St. Louis, USA (international conference, poster).
1. **Pandurangi R, Ralph S**, Perry K, Vrzoc M, Petras M (October 3-5, 1994) Monitoring genetic damage in two species of fish. 21st Annual Aquatic Toxicity Workshop, Sarnia, Canada (national conference, poster).

Curriculum vitae last updated August 21, 2009.