Curriculum Vitae
LOREN H. RIESEBERG

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Work Experience

2016-	Director, Biodiversity Research Centre, U. British Columbia
2016-	University Killam Professor, Department of Botany, U. British Columbia
2016-	Associate Director, Research, UBC Botanical Garden
2006-16	Professor, Department of Botany, University of British Columbia
2004-	Distinguished Professor, Department of Biology, Indiana University
2000-04	Associate Chair for Research and Facilities, Department of Biology, Indiana U.
1997-04	Professor, Department of Biology, Indiana University
1996-00	Director, Plant Sciences Program, Indiana University
1993-97	Associate Professor, Department of Biology, Indiana University
1987-93	Assistant Professor of Botany, Claremont Graduate School, CA

Academic and Training Background

1987	Ph.D., Botany, Washington State University, Pullman
1984	M.S., Botany, University of Tennessee, Knoxville
1981	B.A., Biology, Southern College, Chattanooga

Selected Accomplishments and Honours

1. President-elect, Botanical Society of America, 2016-17
2. Darwin–Wallace Medal (medal awarded by the Linnean Society of London for "major advances in evolutionary biology")
3. Fellow, Royal Society of Canada, 2010-
4. Fellow, Society of Biology, 2010-
5. Fellow, Royal Society (UK Academy of Science), 2010-
6. Canada Research Chair (Tier 1) in Plant Evolutionary Genomics, 2006-
7. President, American Genetics Association, 2006
8. Fellow, American Academy of Arts and Sciences, 2004-
9. Stebbins Medal (medal given for the best book, monograph, or article published on plant systematics and plant evolution the previous year), 2004
10. Guggenheim Fellowship, 2004
11. MacArthur Fellowship (Unrestricted $500,000 fellowship awarded to "individuals who have shown extraordinary originality and dedication in their creative pursuits"), 2003-08
12. Fellow, American Association for the Advancement of Science, 2003-
13. Teaching Excellence Recognition Awards, Indiana University, 1997, 1999
14. David Starr Jordan Prize (International prize given once every three years to a scientist under 40 years of age for "innovative contributions to the study of evolution, ecology, population, or organismal biology"), 1998

15. Class of ‘54 Endowed Professorship, 1997-06

Research Funding (past four years)

1. Genome Canada/BC, CoAdapTree, 5,800,000 CAD, 2016-20 (PI: S. Aitken)
2. NSERC, Evol. Genomics of Plant Adaptation and Speciation, 560,000 CAD, 2016-21.
3. Genome Canada/BC, Genomics of Abiotic Stress Resistance, 7,879,009 CAD, 2015-19 (7 co-PIs).
4. NSF, Evol. Genomics of Abiotic Stress Resistance, 4,172,290 USD, 2015-20 (PI: J. Burke).
5. Dupont Pioneer, Genomics of a Crop Protection Trait, 658,000 CAD, 2014-17.
6. CFI / BCDKF, Construction of Envirotron, 2,120,060 CAD, 2013-18 (9 co-PIs).
7. NSF, Repeatability of Adaptive Introgression, 690,000 USD, 2013-19 (PI: K. Whitney).
8. Canada Research Chair in Plant Evolutionary Genomics, 1,400,000 CAD, 2013-20.
9. Seed Industry, Sunflower Genomics Consortium, 1,020,000 CAD, 2012-16 (2 co-PIs).
10. Crop Trust, Sunflower Pre-breeding and Evaluation, 273,000 USD, 2011-14.
11. Genome Canada/BC, AdapTree, 4,700,000 CAD, 2011-14 (PI: S. Aitken).
12. NSERC, Evol. Genomics of Plant Adaptation and Speciation, 600,000 CAD, 2011-16.
13. NSERC, Biodiversity Research & Training, 1,650,000 CAD, 2009-15 (PI: S. Otto).
14. Genome Canada/BC, Genomics of Sunflower, 10,491,589 CAD, 2009-13 (5 co-PIs).
15. NSF, Compositae Genome Project, 8,890,000 USD, 2009-15 (5 co-PIs).

Most Significant Contributions

ADAPTATION AND SPECIATION – My lab has made fundamental advances to our understanding of how species form and persist, especially in the plant kingdom. We established hybridization as a creative evolutionary force, leading to the origin of novel traits and new species, demonstrated that reproductive isolation need not be genome-wide for species to diverge, and showed that polyploid speciation is much more common in plants than previously believed. We also determined that the enhanced growth of weedy and invasive plants stems from hybrid vigour, as well as negative fitness trade-offs with abiotic stress resistance. Representative pubs: Nature 375:313-316 (1995); Science 272:741-744 (1996); Science 301:1211-1216 (2003); Nature 440:524-527 (2006); Science 317:910-914 (2007); Ecol Letters 11:1082-1091 (2008); PNAS 106:13875-13879 (2009); Science 333:1257 (2011); Nature Com 4, 1827 (2013); Nature Plant, article 15066 (2015); Invasion Genetics: The Baker and Stebbins Legacy (2017).

DOMESTICATION – Another focus of my research has been to use genomic analyses to reveal crop origins and to determine the genetic basis of domestication traits. My group settled a high-profile controversy by demonstrating that sunflower was domesticated in the eastern U.S. and not in southern Mexico. This finding established the eastern U.S. as an independent centre of origin of cultivated plants and agriculture. At the functional level, we cloned and characterized candidate genes underlying quantitative trait loci for flowering time between wild and domesticated sunflowers. This work revealed how gene duplication creates potential for evolutionary innovation not just through creating new gene content but also through new interactions among duplicates. Representative pubs: Science 300:1250 (2003); Nature 430:201-205 (2004); Current Biol 20:629-635 (2010); PNAS 108:14360–14365 (2011); Plant Cell 24:2710-2717 (2012); PLoS Genetics 9, e1003378 (2013); New Phytol 206:830-838 (2015).

GENOMICS AND BIOINFORMATICS – I have led several projects to develop genomic tools and resources for the Compositae family, the largest family of flowering plants. These resources include gene catalogs for circa 50 key representatives of the family, fully assembled

and annotated reference sequences for a half dozen crops and weeds, as well as a suite of widely used bioinformatics tools. We have generated genetic and association mapping populations, SNP and expression arrays, a physical map, ultra-dense genetic maps, and an extensive collection of transcriptome and whole genome shotgun sequencing data for sunflower . These tools and resources have been used to identify genes involved in resistance to various abiotic stresses, elucidate genetic changes associated with the evolution of Compositae weeds, and determine the number and phylogenetic position of whole genome duplications in the Compositae. Representative pubs: Genetics 161:1257-1267 (2002); Genetics 175:1803-1812 (2007); Mol Biol Evol 25:2445-2455 (2008); Mol Biol Evol 28:3225–3235 (2011); New Phytol 199:595-608 (2013); Mol Ecol 24:2226-2240 (2015); Nature, in press (2017).

FOOD SECURITY – I am spearheading global efforts to efficiently tap agronomically useful alleles in crop wild relatives for development of environmentally resilient crops. I am a co-founder of the DivSeek Initiative (http://www.divseek.org), which employs genomic and bioinformatics approaches to unlock the potential of crop wild diversity stored in the world's genebanks. I serve as a scientific advisor to the Global Crop Trust and am on the advisory board of the International Climate-Resilient Crop Genomics Consortium. My lab has identified and filled gaps in the germplasm collections of several crops and has developed, characterized, and released hundreds of pre-bred lines in sunflower. We collaborate with numerous breeding programs in both developed (e.g. INRA, KWS, Pioneer, Dow, Syngenta, etc.) and developing countries (INTA - Argentina, IIOR - Indian, NaSARRI - Uganda) to ensure that the genes we identify are integrated into locally adapted cultivars. Representative publications: Science 328:169-170 (2010); Nature 499:23-24 (2013); PNAS 111:4001-4006 (2014); Evol Applications 8:464-475 (2015).

SCIENTIFIC PUBLISHING – I have been the Chief Editor of *Molecular Ecology* since 1999 and co-founded *Molecular Ecology Resources* with Wiley-Blackwell. During my tenure with *Molecular Ecology*, the journal has more than doubled in size and impact (446 articles in 2015; IF = 5.95). More importantly, through editorials, special issues, roadmap papers, and through my own research program, I have contributed to the coalescence of molecular ecology as a scientific discipline, while working to improve data quality, analytical methods, and interpretation. I have worked closely with other journal editors to promote data archiving in evolutionary biology and ecology, and to implement these policies in a practical way. I have championed peer review as the best method we have for evaluating the quality of science, while working actively to improve its implementation, both in scientific journals and on the worldwide web. Representative publications: Nature 16:722 (1999); Amer Nat 173:E155-E158 (2009); Amer Nat 173:145-146 (2010); Nature 468:1041 (2010); Mol Ecol 22:2605-2626 (2013). TREE 31:84-85 (2016).

OVERALL: 372 publications. 30,085 citations. 93 h-index (Google Scholar)

Selected Service

Editorial Board Member and/or Associate Editor for *International Journal of Plant Sciences* (1998-12), *BMC Genetics* (2001-), *Conservation Genetics* (2002-), *Evolutionary Applications* (2008-), *Annual Review of Plant Biology* (2014-); Chief Editor for *Molecular Ecology* (1999); CHIR Genomics Review Panel (2008-10); iPlant Board Member (2009-11); External assessor of Australian National University (2010); Member-at-Large, Biological Sciences Section, AAAS (2010-14); External Reviewer of Department of Plant Science & Department of Zoology at University of Oxford (2011); Member Scientific Advisory Board, The TRIA Project (2011); Evaluator, Guggenheim Foundation Program (2011-15); Advisory Board, International Climate-Resilient Crop Genomics Consortium (2012-); International Scientific

Advisory Board of SUNRISE (2013-); Scientific advisor to the Global Crop Diversity Trust (2013-); Co-founder, DivSeek Initiative (2014-); Chair, Expert Committee Review for the Canada Foundation for Innovation (2014); Science advisor for kids' CBC TV show, Scout & The Gumboot Kids (2014-).