

Peer-Reviewed Publications

*Authors contributed equally

70. Warren RL and Birol I. 2020. HLA predictions from the bronchoalveolar lavage fluid and blood samples of eight COVID-19 patients at the pandemic onset. *Bioinformatics*. <https://doi.org/10.1093/bioinformatics/btaa756>
69. Nip KM, Chiu R, Yang C, Chu J, Mohamadi H, **Warren RL**, Birol I. 2019. RNA-Bloom enables reference-free and reference-guided sequence assembly for single-cell transcriptomes. *Genome Res*. <http://www.genome.org/cgi/doi/10.1101/gr.260174.119>
68. Hafezqorani S, Yang C, Nip KM, **Warren RL**, Birol I. 2020. Trans-NanoSim characterizes and simulates nanopore RNA-seq data. *GigaScience*. 9:1-7 <https://doi.org/10.1093/gigascience/giaa061>
67. Jackman SD, Coombe L, **Warren RL**, Kirk H, Trinh E, McLeod T, Pleasance S, Pandoh P, Zhao Y, Coope RJ, Bousquet J, Bohlmann J, Jones SJM, Birol I. 2019. Complete Mitochondrial Genome of a Gymnosperm, Sitka Spruce (*Picea sitchensis*), Indicates Complex Physical Structure. *Genome Biol Evol*. <https://doi.org/10.1093/gbe/evaa108>
66. Coombe L, Nikolić V, Chu J, Birol I, **Warren RL**. 2020. ntJoin: Fast and lightweight assembly-guided scaffolding using minimizer graphs. *Bioinformatics*. 36:3885. <https://doi.org/10.1093/bioinformatics/btaa253>
65. Law WD, **Warren RL**, McCallion AS. 2020. Establishment of an eHAP1 human haploid cell line hybrid reference genome assembled from short and long reads. *Genomics*. <https://doi.org/10.1016/j.ygeno.2020.01.009>
64. Yang C, Li C, Nip KM, **Warren RL**, Birol I. 2019. Termin(A)ntor: Polyadenylation Site Prediction Using Deep Learning Models. *bioRxiv* 710699; doi: <https://doi.org/10.1101/710699>
63. Lin D, Coombe L, Jackman SD, Gagaloova KK, **Warren RL**, et al. 2019. Complete chloroplast genome sequence of an Engelmann spruce (*Picea engelmannii*) genotype from western Canada. *Microbiol Resour Announc* 8:e00382-19. DOI: 10.1128/MRA.00382-19.
62. Lin D, Coombe L, Jackman SD, Gagaloova KK, **Warren RL**, et al. 2019. Complete chloroplast genome sequence of a white spruce (*Picea glauca*, genotype WS77111) from eastern Canada. *Microbiol Resour Announc* 8:e00381-19. DOI: 10.1128/MRA.00381-19.
61. **Warren RL**, Coombe L, Mohamadi H, Zhang J, Jaquish B, Isabel N, Jones SJM, Bousquet J, Bohlmann J, Birol I. 2019. ntEdit: scalable genome sequence polishing. *Bioinformatics*. 35:4430. <https://doi.org/10.1093/bioinformatics/btz400>

60. Helbing CC, Hammond SA, Jackman SH, Houston S, **Warren RL**, Cameron CE, Birol I. 2019. Antimicrobial peptides from Rana [Lithobates] catesbeiana: Gene structure and bioinformatic identification of novel forms from tadpoles. *Sci. Reports*. 9:1529.
59. Jackman SD, Coombe L, Chu J, **Warren RL**, Vandervalk BP, Yeo S, Xue Z, Mohamadi H, Bohlmann J, Jones SJM, Birol I. 2018. Tigmint: correcting assembly errors using linked reads from large molecules. *BMC Bioinformatics*. 19:393 doi:10.1186/s12859-018-2425-6
58. Xue Z, **Warren RL**, Gibb EA, MacMillan D, Wong J, Chiu R, et al. 2018. Recurrent tumor-specific regulation of alternative polyadenylation of cancer-related genes. *BMC genomics*. 19:536 doi:10.1186/s12864-018-4903-7
57. Coombe L*, Zhang J*, Vandervalk B, Chu J, Jackman S, Birol I, **Warren RL**. 2018. ARKS: chromosome-scale scaffolding of human genome drafts with linked read kmers. *BMC Bioinformatics*. 19:234 doi:10.1186/s12859-018-2243-x
56. **Warren RL**. 2018. Visualizing genome synteny with xmatchview. *Journal of Open Source Software* 3:497 doi:10.21105/joss.00497
55. Khan H, Mohamadi H, Vandervalk BP, **Warren RL**, Chu J, Birol I. 2018. ChopStitch: exon annotation and splice graph construction using transcriptome assembly and whole genome sequencing data. *Bioinformatics*. doi:10.1093
54. Jones SJ, Haulena M, Taylor GA, Chan S, Bilobram S, **Warren RL**, et al. 2017. The Genome of the Northern Sea Otter (*Enhydra lutris kenyoni*). *Genes*. 8:379.
53. Jones SJM, Taylor GA, Chan S, **Warren RL**, Hammond SA, Bilobram S, et al. 2017. The Genome of the Beluga Whale (*Delphinapterus leucas*). *Genes*. 8:378.
52. Hammond SA, **Warren RL**, Vandervalk BP, Kucuk E, Khan H, Gibb EA, Pandoh P, Kirk H, Zhao Y, Jones M, Mungal AJ, Coope R, Pleasance S, Moore RA, Holt RA, Round JM, Ohora S, Walle BV, Veldhoen N, Helbing CC, Birol I. 2017. The North American bullfrog draft genome provides insight into hormonal regulation of long noncoding RNA. *Nature Comm*. 8:1433 doi:10.1038/s41467-017-01316-7
51. Yeo S*, Coombe L*, Chu J, **Warren RL***, Birol I. 2017. ARCS: Scaffolding genome drafts with linked reads. *Bioinformatics*. 34:725-731. doi:10.1093/bioinformatics/btx675
50. Hasan NA, **Warren RL**, Epperson LE, Malecha A, Alexander DC, Turenne

- CY, MacMillan D, Birol I, Pleasance S, Coope R, Jones SJM, Romney MG, Ng M, Chan T, Rodrigues M, Tang P, Gardy JL, Strong M. 2017. Complete Genome Sequence of *Mycobacterium chimaera* SJ42, a Nonoutbreak Strain from an Immunocompromised Patient with Pulmonary Disease. *Genome Announc.* 5:e00963-17. doi: 10.1128/genomeA.00963-17.
49. Yang C, Chu J, **Warren RL**, Birol I. 2017. NanoSim: nanopore sequence read simulator based on statistical characterization. *GigaScience*. 6:1
48. Kucuk E, Chu J, Vandervalk BP, Hammond SA, **Warren RL**, Birol I. 2017. Kollector: transcript-guided de novo targeted assembly of genes. *Bioinformatics*. 33:1782
47. Jackman SD, Vandervalk BP, Mohamadi H, Chu J, Yeo S, Hammond SA, Jahesh G, Khan H, Coombe L, **Warren RL**, Birol I. 2017. ABySS 2.0: resource-efficient assembly of large genomes using a Bloom filter. *Genome Res.* 27:768
46. Chu J, Mohamadi H, **Warren RL**, Yang C, Birol I. 2017. Innovations and challenges in detecting long read overlaps: an evaluation of the state-of-the-art. *Bioinformatics*. 33:1261
45. **Warren RL**. 2016. RAILS and Cobbler: Scaffolding and automated finishing of draft genomes using long DNA sequences. *The Journal of Open Source Software*. doi: 10.21105/joss.00116
44. Coombe L*, **Warren RL***, Jackman SD, Yang C, Vandervalk BP, Moore RA, Pleasance S, Coope RJ, Bohlmann J, Holt RA, Jones SJM, Birol I. 2016. Assembly of the complete Sitka spruce chloroplast genome using 10X Genomics' GemCode sequencing data. *PLoS ONE*. 11(9): e0163059
43. IJspeert H, Rozmus J, Schwarz K, **Warren RL**, van Zessen D, Holt RA, Pico-Knijnenburg I, Simons E, Jerchel I, Wawer A, Ricarda Lorenz M, Patiroğlu T, Haluk Akar H, Leite R, Verkaik NS, Stubbs AP, van Gent DCC, van Dongen JJM, van der Burg M. 2016. XLF deficiency results in reduced N-nucleotide addition during V(D)J recombination. *Blood*. 128:650
42. Jackman SD, **Warren RL**, Gibb EA, Vandervalk BP, Mohamadi H, Chu J, Raymond A, Pleasance S, Coope R, Wildung MR, Ritland CE, Bousquet J, Jones SJM, Bohlmann J, Birol I. 2016. Organellar Genomes of White Spruce (*Picea glauca*): Assembly and Annotation. *Genome Biol Evol.* 8:29
41. Birol I, Chu J, Mohamadi H, Jackman SD, Raghavan K, Vandervalk BP, Raymond A, **Warren RL**. 2015. Spaced Seed Data Structures for De Novo Assembly. *Int J Genomics*. doi: 10.1155/2015/196591
40. Vandervalk BP, Yang C, Xue Z, Raghavan K, Chu J, Mohamadi H, Jackman SD, Chiu R, **Warren RL**, Birol I. 2015. Konnector v2.0: pseudo-long reads

from paired-end sequencing data. *BMC Med Genomics*. 8(Suppl 3):S1

39. **Warren RL**, Yang C, Vandervalk BP, Behsaz B, Lagman A, Jones SJ, Birol I. 2015. LINKS: Scalable, alignment-free scaffolding of draft genomes with long reads. *GigaScience*. 4:35
38. Paulino D*, **Warren RL***, Vandervalk BP, Raymond A, Jackman SD, Birol I. 2015. Sealer: a scalable gap-closing application for finishing draft genomes. *BMC Bioinformatics*. 16:230
37. **Warren RL***, Keeling C*, Yuen M, Raymond A, Taylor G, Vandervalk BP, Mohamadi H, Paulino D, Chiu R, Jackman S, Robertson G, Yang C, Hoffmann M, Weigel D, Ritland C, Isabel N, Jaquish B, Yanchuk A, Bousquet J, Jones S, Nelson D, Mackay J, Birol I, Bohlmann, J. 2015. Improved white spruce (*Picea glauca*) genome assemblies and annotation of large gene families of conifer terpenoid and phenolic defense metabolism. *The Plant Journal*. 83:189
36. Gibb EA, **Warren RL**, Wilson GW, Brown SD, Robertson G, Morin GB, Holt RA. 2015. Activation of an endogenous retrovirus-associated long non-coding RNA in human adenocarcinoma. *Genome Med*. 7:22
35. Birol I, Mohamadi H, Raymond A, Raghavan K, Chu J, Vandervalk BP, Jackman S, **Warren RL**. 2014. Spaced seed data structures, Bioinformatics and Biomedicine (BIBM), 2014 IEEE International Conference, vol., no., pp.15, 2-5 Nov. 2014 doi: 10.1109/BIBM.2014.6999305
34. Vandervalk BP, Jackman SD, Raymond A, Mohamadi H, Yang C, Attali DA, Chu J, **Warren RL**, Birol I. 2014. Konconnector: Connecting paired-end reads using a bloom filter de Bruijn graph, Bioinformatics and Biomedicine (BIBM), 2014 IEEE International Conference, vol., no., pp.51, 2-5 Nov. 2014 doi: 10.1109/BIBM.2014.6999126
33. Watson CT, Steinberg KM, Graves-Lindsay TA, **Warren RL**, Malig M, Schein JE, Wilson RK, Holt R, Eichler E, Breden F. 2014. Sequencing of the human IG light chain loci from a hydatidiform mole BAC library reveals locus-specific signatures of genetic diversity. *Genes Immun*. 16:24–34
32. Brown SD, **Warren RL**, Gibb EA, Martin SD, Spinelli JJ, Nelson BH, Holt RA. 2014. Neo-antigens predicted by tumor genome meta-analysis correlate with increased patient survival. *Genome Res*. 24:743-50
31. **Warren RL**, Freeman DJ, Pleasance S, Watson P, Moore RA, Cochrane K, Allen-Vercoe E, Holt RA. 2013. Co-occurrence of anaerobic bacteria in colorectal carcinomas. *Microbiome*. 1:16
30. Watson CT, Steinberg KM, Huddleston J, **Warren RL**, Malig M, Schein J, Willsey AJ, Joy JB, Scott JK, Graves TA, Wilson RK, Holt RA, Eichler EE,

- Breden F. 2013. Complete haplotype sequence of the human immunoglobulin heavy-chain variable, diversity, and joining genes and characterization of allelic and copy-number variation. *Am J Hum Genet.* 92:530-546
29. Branton WG, Ellestad KK, Maingat F, Wheatley BM, Rud E, **Warren RL**, Holt RA, Surette MG, Power C. 2013. Brain Microbial Populations in HIV/AIDS: α -Proteobacteria Predominate Independent of Host Immune Status. *PLoS One* 8(1):e54673
28. **Warren RL**, Choe G, Freeman DJ, Castellarin M, Munro S, Moore R, Holt RA. 2012. Derivation of HLA types from shotgun sequence datasets. *Genome Med.* 4:95
27. Castellarin M*, **Warren RL***, Freeman JD, Dreolini L, Krzywinski M, Strauss J, Barnes R, Watson P, Allen-Vercoe E, Moore RA, Holt RA. 2012. *Fusobacterium nucleatum* infection is prevalent in human colorectal carcinoma. *Genome Res.* 22:299-306
26. Moore RA*, **Warren RL***, Freeman JD, Gustavsen JA, Chénard C, et al. 2011. The Sensitivity of Massively Parallel Sequencing for Detecting Candidate Infectious Agents Associated with Human Tissue. *PLoS ONE* 6(5):e19838
25. **Warren RL**, Holt RA. 2011. Targeted assembly of short sequence reads. *PLoS ONE* 6(5):e19816
24. Bhat RK, Ellestad KK, Wheatley BM, **Warren R**, Holt RA, Power C. 2011. Age- and Disease-Dependent HERV-W Envelope Allelic Variation in Brain: Association with Neuroimmune Gene Expression. *PLoS ONE* 6(4): e19176
23. **Warren RL**, Freeman JD, Zeng T, Choe G, Munro S, Moore R, Webb JR, Holt RA. 2011. Exhaustive T-cell repertoire sequencing of human peripheral blood samples reveals signatures of antigen selection and a directly measured repertoire size of at least 1 million clonotypes. *Genome Res.* 21:790-797
22. D'Souza CA, Kronstad JW, Taylor G, **Warren R**, Yuen M, Hu G, Jung WH, Sham A, Kidd SE, Tangen K, Lee N, Zeilmaker T, Sawkins J, McVicker G, Shah S, Gnerre D, Griggs A, Zeng Q, Bartlett K, Li W, Wang X, Heitman J, Stajich JE, Fraser JA, Meyer W, Carter D, Schein J, Krzywinski M, Kwon-Chung KJ, Varma A, Wang J, Brunham R, Fyfe M, Ouellette BFF, Siddiqui A, Marra M, Jones S, Holt R, Birren BW, Galagan JE and Cuomo CA. 2011. Genome Variation in *Cryptococcus gattii*, an Emerging Pathogen of Immunocompetent Hosts. *mBio*. doi:10.1128/mBio.00342-10
21. **Warren RL** and Holt RA. 2010. A census of predicted mutational epitopes suitable for immunologic cancer control. *Hum Immunol.* 71:245-254

20. Shah SP, Morin RD, Khattra J, Prentice L, Pugh T, Burleigh A, Delaney A, Gelmon K, Guliany R, Senz J, Steidl C, Holt RA, Jones S, Sun M, Leung G, Moore R, Severson T, Taylor GA, Teschendorff AE, Tse K, Turashvili G, Varhol R, **Warren RL**, Watson P, Zhao Y, Caldas C, Huntsman D, Hirst M, Marra MA, Aparicio S. 2009. Mutational evolution in a lobular breast tumour profiled at single nucleotide resolution. *Nature*. 461:809-813
19. Pel J, Broemeling D, Mai L, Poon HL, Tropini G, **Warren RL**, Holt RA, Marziali A. 2009. Nonlinear electrophoretic response yields a unique parameter for separation of biomolecules. *Proc Natl Acad Sci U S A*. 106:14796-14801
18. Freeman JD*, **Warren RL***, Webb JR, Nelson BH, Holt RA. 2009. Profiling the T-cell receptor beta-chain repertoire by massively parallel sequencing. *Genome Res*. 19:1817-1824
17. **Warren RL**, Nelson BH, Holt RA. 2009. Profiling model T cell metagenomes with short reads. *Bioinformatics*. 25:458-464
16. **Warren RL**, Freeman JD, Levesque RC, Smailus DE, Flibotte S, Holt RA. 2008. Transcription of foreign DNA in Escherichia coli. *Genome Res*. 18:1798-1805
15. Smailus DE, **Warren RL**, Holt RA. 2008. Constructing large DNA segments by iterative clone recombination. *Syst. Synth. Biol*. 1:139-144
14. Holt RA, **Warren R**, Flibotte S, Missirlis PI, Smailus DE. 2007. Rebuilding microbial genomes. *Bioessays*. 29:580-590
13. **Warren RL**, Sutton GG, Jones SJ, Holt RA. 2007. Assembling millions of short DNA sequences using SSAKE. *Bioinformatics*. 23:500-501
12. Mullick A, Xu Y, **Warren R**, Koutroumanis M, Guilbault C, Broussau S, Malenfant F, Bourget L, Lamoureux L, Lo R, Caron AW, Pilote A, Massie B. 2006. The Cumate gene-switch: a system for regulated expression in mammalian cells. *BMC Biotechnology*. 6:43
11. Bainbridge MN, **Warren RL**, He A, Bilenky M, Robertson AG, Jones SJ. 2006. THOR: Targeted high-throughput ortholog reconstructor. *Bioinformatics*. 23:2622-2624
10. Bainbridge MN, **Warren RL**, Hirst M, Romanuik T, Zeng T, Go A, Delaney A, Griffith M, Hickenbotham M, Magrini V, Mardis ER, Sadar MD, Siddiqui AS,

Marra MA, Jones SJ. 2006. Analysis of the prostate cancer cell line LNCaP transcriptome using a sequencing-by-synthesis approach. *BMC Genomics*. 7:246

9. **Warren RL**, Varabei D, Platt D, Huang X, Messina D, Yang SP, Kronstad JW, Krzywinski M, Warren WC, Wallis JW, Hillier LW, Chinwalla AT, Schein JE, Siddiqui AS, Marra MA, Wilson RK, Jones SJ. 2006. Physical map-assisted whole-genome shotgun sequence assemblies. *Genome Res*. 16:768-775
8. McLeod MP, **Warren RL**, Hsiao WW, Araki N, Myhre M, Fernandes C, Miyazawa D, Wong W, Lillquist AL, Wang D, Dosanjh M, Hara H, Petrescu A, Morin RD, Yang G, Stott JM, Schein JE, Shin H, Smailus D, Siddiqui AS, Marra MA, Jones SJ, Holt R, Brinkman FS, Miyauchi K, Fukuda M, Davies JE, Mohn WW, Eltis LD. 2006. The complete genome of *Rhodococcus* sp. RHA1 provides insights into a catabolic powerhouse. *Proc Natl Acad Sci U S A*. 103:15582-15587
7. Bakkeren G, Jiang G, **Warren RL**, Butterfield Y, Shin H, Chiu R, Linning R, Schein J, Lee N, Hu G, Kupfer DM, Tang Y, Roe BA, Jones S, Marra M, Kronstad JW. 2006. Mating factor linkage and genome evolution in basidiomycetous pathogens of cereals. *Fungal Genetics and Biology*. 43:655-666
6. **Warren RL**, Butterfield YS, Morin RD, Siddiqui AS, Marra MA, Jones SJM. 2005. Management and visualization of whole genome shotgun assemblies using SAM. *Biotechniques*. 38:715-720
5. **Warren R**, Hsiao WW, Kudo H, Myhre M, Dosanjh M, Petrescu A, Kobayashi H, Shimizu S, Miyauchi K, Masai E, Yang G, Stott JM, Schein JE, Shin H, Khattri J, Smailus D, Butterfield YS, Siddiqui A, Holt R, Marra MA, Jones SJ, Mohn WW, Brinkman FS, Fukuda M, Davies J, Eltis LD. 2004. Functional characterization of a catabolic plasmid from polychlorinated-biphenyl-degrading *Rhodococcus* sp. strain RHA1. *J. Bacteriol*. 186:7783-7795
4. **Warren R**, Molday RS. 2002. Regulation of the rod photoreceptor cyclic nucleotide gated channel. *Adv Exp Med Biol*. 514:205-223
3. Molday RS, **Warren R**, Molday LL. 2000. Purification and biochemical analysis of the cGMP-gated channel and Na/Ca-K exchanger of rod photoreceptors. *Methods Enzymol*. 315:831-847
2. Molday RS, **Warren R**, Loewen C, Molday L. 1999. Cyclic GMP-gated channel and peripherin/rds-rom-1 complex of rod cells. In: *Rhodopsin and Phototransduction. Novartis Found Symp*. 224:249-261. Publisher: John Wiley & Sons, N.Y.

1. Durocher D, Charron F, **Warren R**, Schwartz RJ, Nemer M. 1997. The cardiac transcription factors Nkx2-5 and GATA-4 are mutual cofactors. *EMBO J.* 16:5687-5696

Patents

1. E Allen-Vercoe, R Holt, R Moore, R Warren - US Patent App. 13/877,421, 2011. Detection of fusobacterium in a gastrointestinal sample to diagnose gastrointestinal cancer.

First-Author Conference Presentations

17. 27th Intelligent Systems for Molecular Biology (ISMB), Basel, Switzerland. July 2019 (Poster)
16. 22nd Annual International Conference on Research in Computational Molecular Biology (RECOMB), Paris, France, April 2018 (Poster)
15. 21st Annual International Conference on Research in Computational Molecular Biology (RECOMB), Hong Kong, May 2017 (Selected talk)
14. American Society of Human Genetics (ASHG), Vancouver, Canada, October 2016 (Poster)
13. 24th Intelligent Systems for Molecular Biology (ISMB), Orlando, Florida, USA. July 2016 (Invited talk – highlights track)
12. 23rd Intelligent Systems for Molecular Biology (ISMB), Dublin, Ireland. July 2015 (Invited talk – late breaking research track. Selected talk - HiTSeq)
11. Student Biotechnology Network, Vancouver, Canada. February 2015 (Invited talk)
10. Pacific Symposium on Biocomputing, Kona, Hawaii, USA. January 2015 (Poster)
9. Pacific Symposium on Biocomputing, Kona, Hawaii, USA. January 2012 (Poster)
8. Sequencing, Finishing and Analysis in the Future, Santa Fe, New Mexico, USA. June 2010 (Oral presentation)
7. Advances in Genome Biology and Technology, Marco Island, Florida, USA. February 2009 (2 Posters)
6. Pacific Symposium on Biocomputing, Kona, Hawaii, USA. January 2008

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(Poster)

5. Synthetic Biology 3.0 conference, Zurich, Switzerland. June 2007 (Invited talk)
4. 5th CSHL/Wellcome Trust Genome Informatics meeting. Cold Spring Harbor, New-York, USA. October 2005 (Poster)
3. 7th Annual Conference on Computational Genomics. Reston, Virginia, USA. October 2004 (Poster)
2. Genomes 2004: International Conference on Microbial Genomes analysis. Hinxton, UK. April 2004 (Poster)
1. 3rd CSHL/Wellcome Trust Genome Informatics meeting. Cold Spring Harbor, New-York, USA. May 2003 (Poster)