Publications during past five years

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Publications (last 5 years)

Peer-reviewed journal articles

- 1. M.S. Kumar^{^#}, E.V. Slud, K. Okrah[#], S.C. Hicks, S. Hannenhalli, **H. Corrada Bravo*** (2018). Analysis and correction of compositional bias in sparse sequencing count data. *BMC Genomics, in press*.
- 2. J.S. Meisel[^], D.J. Nasko, B. Brubach, V. Cepeda Espinoza, J. Chopyk, **H. Corrada-Bravo**, M. Fedarko, J. Ghurye, K. Javkar, N.D. Olson[#], N. Shah, S.M. Allard, A.L. Bazinet, N.H. Bergman, A. Brown, J.G. Caporaso, S. Conlan, J. DiRuggiero, S.P. Forry, N.A. Hasan, J. Kralj, P.M. Leuthy, D.K. Milton, B.D. Ondov, S. Preheim, S. Ratnayake, S.M. Rogers, M.J. Rosovitz, E.G. Sakowski, N.O. Schliebs, D.D. Sommer, K.L. Ternus, G. Uritskiy, S.X. Zhang, M. Pop, T.J. Treangen* (2018). Current progress and future opportunities in applications of DNA sequencing for biodefense and pathogen detection: Report from the Winter Mid-Atlantic Microbiome Meet-up, College Park, MD January 10th, 2018. *Microbiome, in press*.
- 3. A.E. Nazario-Toole^, J. Robalino, K. Okrah[#], **H. Corrada Bravo**, S.M. Mount, L.P. Wu* (2018). The splicing factor RNA-binding Fox Protein 1 mediates the cellular immune response in Drosophila melanogaster. *The Journal of Immunology*, doi:10.4049/jimmunol.1800496.
- 4. J. Kancherla^{*}, A. Zhang[#], B. Gottfried[#], **H. Corrada Bravo**^{*} (2018). Epiviz Web components: reusable and extensible component library to visualize genomic datasets. *F1000 Research* 7:1096, doi:10.12688/f1000research.15433.1.
- 5. J. Wagner^#, F. Chelaru^#, J. Kancherla^, J.N. Paulson^#, A. Zhang#, V. Felix, A. Mahurkar, N. Elmqvist, **H. Corrada Bravo*** (2018). Metaviz: interactive statistical and visual analysis of metagenomic data. *Nucleic Acids Research* gky136, doi:10.1093/nar/gky136.
- 6. S. Hicks[^], K. Okrah[#], J. Paulson[#], J. Quackenbush, R. Irizarry, **H. Corrada Bravo*** (2018). Smooth quantile normalization. *Biostatistics* 19(2): 185-198, doi:10.1093/biostatistics/kxx028.
- 7. S. Braid^, K. Okrah[#], A. Shetty, **H. Corrada Bravo*** (2017). Differences in DNA methylation patterns in the cord blood of neonates across gestational age are associated with differences in cell-type composition. *Nursing Research* 66(2): 115-122, doi:10.1097/NNR.000000000000210.
- 8. S. Manimaran^, H.M. Selby, K. Okrah[#], C. Ruberman, J.T. Leek, J. Quackenbush, B. Haibe-Kains, **H. Corrada Bravo**, W.E. Johnson* (2016). BatchQC: interactive software for evaluating sample and batch effects in genomic data. *Bioinformatics* 32(24):3836-3838, doi:10.1093/bioinformatics/btw538.
- 9. M. Pop^, J.N. Paulson[#], S. Chakraborty, I. Astrovskaya, B.R. Lindsay, S. Li, **H. Corrada Bravo**, C. Harro, J. Parkhill, A.W. Walker, R.I. Walker, D.A. Sack, O.C. Stine* (2016). Individual-specific changes in the human gut microbiota after challenge with enterotoxigenic *Escherichia coli* and subsequent ciprofloxacin treatment. *BMC Genomics* 17(1):440, doi:10.1186/s12864-016-27777-0.
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- 11. J. Wagner^#, J. Paulson#, X.S. Wang, B. Bhattacharjee, **H. Corrada Bravo*** (2016). Privacy preserving human microbiome analysis using secure computation. *Bioinformatics*, doi:10.1093/bioinformatics/btw073.

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- 14. M.C. Fernandes^, L.A. Dillon^, A.T. Belew, **H. Corrada Bravo**, D.M. Mosser, N. El-Sayed* (2016). Dual transcriptome profiling of human macrophages infected with *Leishmania* parasites reveals transient reprogramming events followed by a generic phagocytic response. *mBio* 7(3). pii: e00027-16, doi:10.1128/mBio.00027-16.
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- 19. W. Dinalankara^#, **H. Corrada Bravo*** (2015). Gene expression signatures based on variability can robustly predict tumor progression and prognosis. *Cancer Informatics* 14:71-81.
- 20. H.S. Parker[^], **H. Corrada Bravo**, J.T. Leek* (2014). Removing batch effects for prediction problems with frozen surrogate variable analysis. *PeerJ* 2:e561, doi:10.7717/peerj.561.
- 21. W. Timp^, **H. Corrada Bravo**^, O.G. McDonald, M. Goggins, C. Umbricht, M. Zeiger, A.P. Feinberg*, R.A. Irizarry* (2014). Large hypomethylated blocks related to large heterochromatin regions as a universal defining epigenetic alteration in human solid tumors. *Genome Medicine* 6:61, doi:10.1186/s13073-014-0061-y.
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- 24. M. Aryee^, A. Jaffe, **H. Corrada Bravo**, C. Ladd-Acosta, A. Feinberg, K. Hansen*, R.A. Irizarry* (2014). Minfi: a flexible and comprehensive Bioconductor package for the analysis of Infinium DNA Methylation microarrays. *Bioinformatics* 30 (10):1363-9.
- 25. C. Ye^{A#}, C. Hsiao[#], **H. Corrada Bravo*** (2014). BlindCall: ultra-fast base-calling of second-generation sequencing by blind deconvolution. *Bioinformatics* 30 (9):1214-9.
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- 27. E. Alemu^, J.W. Carl, **H. Corrada Bravo***, S. Hannenhalli* (2014). Determinants of expression variability. *Nucleic Acids Research* 42 (6), 3503-14.
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- 29. X. He^, R. Chatterjee^, S. John, **H. Corrada Bravo**, B.K. Sathyanarayana, S.C. Biddle, P.C. Fitzgerald, J.A. Stamatoyannopoulos, G.L. Hager, C. Vinson* (2013). Contribution of nucleosome binding preferences and co-occurring DNA sequences to transcription factor binding. *BMC Genomics* 14 (428).
- 30. M.L. Nickerson[^], K.M. Im, K.J. Misner, W. Tan, H. Lou, B. Gold, D.W. Wells, **H. Corrada Bravo**, K.M. Fredrikson, T.T. Harkins, P. Milos, B. Zbar, W.M. Linehan, M. Yeager, T. Andresson, M. Dean*, G.S. Bova* (2013). Somatic alterations contributing to metastasis of a castration-resistant prostate cancer. *Human Mutation* 34 (9): 1231-41, doi:10.1002/humu.22346.

31. S. Boca^, **H. Corrada Bravo**, B. Caffo, J.T. Leek*, G. Parmigiani (2013). A decision-theory approach to interpretable set analysis for high-dimensional data. *Biometrics* 69 (3):614-23, doi:10.1111/biom.12060.

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- 1. M.K. Gunady^{*}, S. Cornwell^{*}, S.M. Mount, **H. Corrada Bravo*** (2017). Yanagi: transcript segment library construction for RNA-seq quantification. *17th Workshop for Algorithms in Bioinformatics (WABI)* 2017.
- 2. F. Dorri^{*}, L. Mendelowitz, **H. Corrada Bravo*** (2015). methylFlow: cell-specific methylation pattern reconstruction from high-throughput bisulfite-converted DNA sequencing. *HitSEQ 2015; Bioinformatics 32(11):1618-24*.
- 3. F. Chelaru^*, **H. Corrada Bravo*** (2015). Epiviz: a view inside the design of an integrated visual analysis software for genomics. *BioVis 2015; BMC Bioinformatics 16(Supl 11):S4*.

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- 1. M.K. Gunady^{^#}, S. Mount, **H. Corrada Bravo*** (2018). Fast and interpretable alternative splicing and differential gene-level expression analysis using transcriptome segmentation with Yanagi. *biorxiv* https://doi.org/10.1101/364281.
- 2. N.D. Olson^{*}, M. Senthil Kumar[#], S. Li, S. Hao, W. Timp, M.L. Salit, O.C. Stine, **H. Corrada Bravo*** (2018). Assessing 16S marker gene survey data analysis methods using mixtures of human stool sample DNA extracts. *biorxiv* https://doi.org/10.1101/400226.
- 3. M.S. Kumar^{^#}, E.V. Slud, K. Okrah[#], S.C. Hicks, S. Hannenhalli, **H. Corrada Bravo*** (2017). Analysis and correction of compositional bias in sparse sequencing count data. *biorxiv* https://doi.org/10.1101/142851.
- 4. J. Wanger^{*}, F. Chelaru^{*}, J. Kancherla^{*}, J. Paulson^{*}, V. Felix, A. Mahurkar, **H. Corrada Bravo**^{*} (2017). Metaviz: interactive statistical and visual analysis of metagenomic data. *biorxiv* https://doi.org/10.1101/105205.
- 5. J. Paulson^{*}, H. Talukder[#], **H. Corrada Bravo*** (2017). Longitudinal differential abundance analysis of microbial marker-gene surveys using smoothing splines. *biorxiv* https://doi.org/10.1101/099457.
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- 9. M. Sharmin^#, **H. Corrada Bravo**, S. Hannenhalli* (2015). Heterogeneity of Transcription Factor binding specificity models within and across cell lines. *biorxiv* http://dx.doi.org/10.1101/028787.
- 10. W. Dinalankara^#, **H. Corrada Bravo** (2013). Anomaly classification with the anti-profile support vector machine. *arXiv preprint server* arXiv:1301.3514 [stat.ML].
- 11. H.S. Parker^, **H. Corrada Bravo**, J.T. Leek (2013). Removing batch effects for prediction problems with frozen surrogate variable analysis. *arXiv* preprint server arXiv:1031.3947 [stat.ME].