

Jeffrey Ross-Ibarra

Department of Evolution and Ecology
Center for Population Biology
Genome Center
University of California Davis

Phone: (530) 752-4565
Email: rossibarra@ucdavis.edu
Web: rilab.ucdavis.edu, [@jrossibarra](https://twitter.com/jrossibarra)

Education

PhD Genetics, University of Georgia 2006
MS Botany, University of California Riverside 2000
BA Botany, University of California Riverside 1998

Academic Employment

Professor, Dept. Evolution and Ecology, University of California Davis 2019-present
Professor, Dept. Plant Sciences, University of California Davis 2016-2019
Associate Professor, Dept. Plant Sciences, University of California Davis 2012-2016
Assistant Professor, Dept. Plant Sciences, University of California Davis 2009-2012
Postdoctoral Researcher, University of California Irvine 2006-2008
Profesor de Asignatura, Universidad Nacional Autónoma de México 2001

Selected Fellowships and Awards

Fellow, AAAS 2021
Corn Pun Trophy, Genetics Society of America 2017
Stadler Mid-Career Excellence in Maize Genetics Award 2016
Faculty Development Award in recognition of university service 2015
DuPont Young Professor Award 2012
Presidential Early Career Award for Scientists and Engineers 2009
Dean's Award for Postdoctoral Excellence, UC Irvine 2008

Instruction and Advising

Current (total) advisees: 6 (25) postdoc, 4 (9) graduate, 3 (30) undergraduate
Plant Biology (UC Davis, PLB200A, graduate), 2018-present
Genetics (UC Davis, BIS 101, undergraduate), 2013-present
Ecological Genomics (UC Davis, ECL 243, graduate), 2014-present
Faculty advisor, US-Mexico graduate student exchange program, 2011-2015
Population and Quantitative Genetics (GGG 201D, graduate), 2010-2013
Plant Genetics (PLS 152, undergraduate), 2010-2011
Biología de Plantas I (undergraduate), UNAM, 2001

Service: selected from last 2 years

University

Chair, CBS High Performance Computing Advisory Cmte
 Chair, Ecology & Evolution Seminar Series
 Faculty Executive Cmte, College of Biological Sciences
 Advisory cmte, controlled environment facility
 Advisor, graduate student of color mentoring program
 Faculty host, HBCU summer research internship program
 Campus-wide High-Performance Computing Task Force
 Executive Cmte, Plant Biology Graduate Group
 Ecology Graduate Group admissions committee
 Graduate advisor in ecological genomics, Ecology Graduate Group
 Campus Disciplinary Peer Review Committee on sexual violence and sexual harassment
 Section Chair for Agricultural Plant Biology
 Plant Sciences executive committee
 Faculty advisor, Corteva graduate student symposium in plant science
 Search committees: Climate Adaptation
 Dept. of Plant Sciences academic planning committee

Professional

Chair, PEQG Conference (2022)
 Advisory board, FOREVER project
 Organizing Committee, PEQG 2020 Conference
 Abstract review, SACNAS
 Organizer, Zeavolution webinar series
 Maize Genetics conference steering committee
 Maize Genetics Awards Committee
 Editorial Boards: Genes, Genomes, and Genetics (Senior and Associate Editor), New Phytologist (Associate Editor), PLoS Genetics (Associate Editor), PeerJ (Senior and Associate Editor)
 Grant peer review: NSF
 Journal peer review: eLife, Cell, Nature, Nature Communications, Nature Reviews Genetics, Science, PLoS Genetics, Genetics, New Phytologist, The Plant Journal, Plant Cell, Molecular Ecology, G3

Current Funding

NSF: "Uncovering the role of transposons in maize variation" \$800,000 of \$4.5M total (Co-PI), 2019-2022
 NSF: "Harnessing convergence and constraint to predict adaptations to abiotic stress for maize and sorghum" \$740,000 of \$5.4M total (Co-PI), 2018-2022
 NSF: "The evolutionary genetics of pollen-pistil incompatibility and reproductive isolation in *Zea mays*" \$320,000 of \$1M total (Co-PI), 2018-2021
 NSF: "The genetics of highland adaptation in maize", \$4.2M (PI), 2016-2021

Invited Seminars, previous 2 years

U. Zurich, April 2021
 Gates Foundation, April 2021
 U. Vienna, Mar. 2021
 Fresno State U, Jan. 2021
 Carnegie Institution for Science, Stanford, Dec. 2020
 Calvin Spering Memorial Biodiversity Lectureship, CSSA meeting, Nov 2020
 NC State, Nov 2020
 Stony Brook U, Sept. 2020
 U. Oulu, Finland, April 2020
 NYU Abu Dhabi, Feb. 2020
 U. Oregon, Feb 2020
 U. Massachusetts, Nov 2019
 Chinese Academy of Agricultural Sciences, June 2019
 U. of Science and Technology, Beijing, China, June 2019
 International Forum on Crop Science, Wuhan, June 2019
 UC Riverside, May 2019
 U. Vermont, Apr 2019
 U. Washington, Mar 2019

Publications (lab members bold, *equal contribution, †undergraduate, §corresponding, [citations])

Preprints

Chen L*, Luo J*, Minliang Jin*, **Yang N***§, Liu X, Peng Y, Li W, Liu Q, Yin Y, Ye X, Yan J, Zhang Q, Zhang X, Gui S, Wu S, Wang Y, Luo Y, Jiang C, Deng M, Jin M, Jian L, Yu Y, Zhang M, Yang X, Hufford MB, Fernie AR, Warburton ML, **Ross-Ibarra J**§, Yan J§. Portrait of a genus: the genetic diversity of *Zea*. doi: 10.1101/2021.04.07.438828

Calfee E§, **Gates DJ**, **Lorant A**, **Perkins MT**, Coop GM§, **Ross-Ibarra J**§. Selective sorting of ancestral introgression in maize and teosinte along an elevational cline. doi: 10.1101/2021.03.05.434040

Guerra-Garcia A, Rojas-Barrera IC, **Ross-Ibarra J**, Papa R, Piñero D. The genomic signature of wild-to-crop introgression during the domestication of scarlet runner bean (*Phaseolus coccineus* L.). doi: 10.1101/2021.02.03.429668v1 [0]

Rodríguez-Zapata F, Barnes AC, Blöcher-Juárez KA, **Gates DJ**, Kur A, Wang L, Janzen GM, Jensen S, Estévez-Palmas JM, Crow T, Taylor Crow, Aguilar-Rangel R, Demesa-Arevalo E, Skopelitis T, Pérez-Limón S, Stuttsa WL, Chiu Y-C, Jackson D, Fiehn O, Runcie D, Buckler ES, **Ross-Ibarra J**, Hufford M, Sawers RJH, Rellán-Álvarez R. Teosinte introgression modulates phosphatidylcholine levels and induces early maize flowering. doi: 10.1101/2021.01.25.426574 [0]

Hufford MB, Seetharam AS, Woodhouse MR, Chougule KM, Ou S, Liu J, Ricci WA, Guo T, Olson A, Qiu Y Della Coletta R, **Tittes S**, **Hudson AI**, Marand AP, Wei S Lu Z, Wang B, Tello-Ruiz MK, Piri R, Wang N, Kim D, Zeng Y, O'Connor CH, Li X, Gilbert AM, Baggs E, Krasileva KV, Portwood JL, Cannon EKS, Andorf CM, Manchanda N, Snodgrass SJ, Hufnagel DE, Jiang Q, Pedersen S, Syring

ML, Kudrna DA, Llaca V, Fengler K, Schmitz RJ, **Ross-Ibarra J**, Yu J, Gent JL, Hirsch CN, Ware D, Dawe RK. De novo assembly, annotation, and comparative analysis of 26 diverse maize genomes. doi: 10.1101/2021.01.14.426684 [0]

Rushworth CA, Wardlaw AM, **Ross-Ibarra J**, Brandvain Y. Conflict over fertilization underlies the transient evolution of reinforcement. doi: 10.1101/2020.11.10.377481v1 [0]

Song CB, Wang H, Wu, Y, Rees E, **Gates DJ**, Burch M, Bradbury PJ, **Ross-Ibarra J**, Kellogg EA, Hufford MB, Romay MC, Buckler ES. Constrained non-coding sequence provides insights into regulatory elements and loss of gene expression in maize. doi: 10.1101/2020.07.11.192575 [0]

Gates DJ[§], Runcie D, Janzen GM, Romero Navarro A, Willcox M, Sonder K, Snodgrass SJ, Rodríguez-Zapata F, Sawers RJH, Rubén Rellán-Álvarez, Buckler ES, Hearne S, Hufford MB, **Ross-Ibarra J**[§]. Single-gene resolution of locally adaptive genetic variation in Mexican maize. doi: 10.1101/706739 [9]

Stitzer MC[§], Anderson SN, Springer NM, **Ross-Ibarra J**. The Genomic Ecosystem of Transposable Elements in Maize. doi: 10.1101/559922 [23]

In press or in print

H-Index 45 (10428 citations as of Fri Apr 16 11:33:15 2021)

94. **Wang L**, Josephs EB, Lee KM, Roberts LM, Rellán-Álvarez R, **Ross-Ibarra J**[§], Hufford MB[§] (2021). Molecular parallelism underlies convergent highland adaptation of maize landraces. *MBE Accepted*[6]
93. Muyle A, **Ross-Ibarra J**, Seymour DK, Gaut BS (2021). Gene body methylation is under selection in *Arabidopsis thaliana*. *GENETICS Accepted* [1]
92. Lozano R, Gazave E, dos Santos JPR, Stetter MG, Valluru R, Bandillo N, Fernandes SB, Brown PJ, Shakoor N, Mockler T, Cooper EA, **Perkins MT**, Buckler ES, **Ross-Ibarra J**[§], Gore M[§] (2021). Comparative evolutionary analysis and prediction of deleterious mutation patterns between sorghum and maize. *NATURE PLANTS* 7: 17-24 [2]
91. Xu G, Lyu J, Li Q, Liu H, Wang D, Zhang M, Springer NM, **Ross-Ibarra J**, Yang J (2020). Adaptive evolution of DNA methylation reshaped gene regulation in maize *NATURE COMMUNICATIONS* 11: 5539 [7]
90. Chen Q, Samayo LF, Yang CJ, Bradbury PJ, Olukolu BA, Neumeyer MA, Romay, MC, Sun Q, **Lorant A**, Buckler ES, **Ross-Ibarra J**, Holland JB, Doebley JF (2020). The genetic architecture of the maize progenitor, teosinte, and how it was altered during maize domestication *PLOS GENETICS* 16.5:e1008791. [6]
89. **Zeitler L**, **Ross-Ibarra J**[§], **Stetter MGS**[§] (2020). Selective loss of diversity in doubled-haploid lines from European maize landraces. *G3* 10: 2497-2506 [1]
88. Wang B, Lin Z, Li X, Zhao Y, Zhao B, Wu G, Ma X, Wang H, Xie Y, Li Q, Song G, Kong D, Zheng Z, Wei H, Shen R, Chen C, Meng Z, Wang T, Li X, Chen Y, Lai J, Hufford MB, **Ross-Ibarra J**, He H, Wang H (2020). Genome-wide selection and genetic improvement during modern maize breeding.

NATURE GENETICS 52: 565-571 [22]

87. Torres R*, **Stetter MG***, Hernandez R[§], **Ross-Ibarra J[§]** (2020). The temporal dynamics of background selection in non-equilibrium populations. *GENETICS* 214: 1019-1030 [9]
86. **Turner-Hissong SD[§]**, Mabrey ME, Beissinger TM, **Ross-Ibarra J**, Pires JC (2020). Evolutionary insights into plant breeding. *CURRENT OPINION IN PLANT BIOLOGY* 54: 93-100 [8]
85. Anderson SN, **Stitzer MC**, Zhou P, **Ross-Ibarra J**, Hirsch CD, Springer NM (2019) Dynamic patterns of transcript abundance of transposable element families in maize. *G3* 9: 3673-3682 [18]
84. Anderson SN*, **Stitzer MC***, Brohammer A*, Zhou P, Noshay JM, O'Connor CH, Hirsch CD, **Ross-Ibarra J**, Hirsch CN, Springer NM (2019). Transposable elements contribute to dynamic genome content in maize. *THE PLANT JOURNAL* 100: 1052-1065 [38]
83. Wei X, Anderson SN, Wang X, Yang L, Crisp PA, Li Q, Noshay J, Albert PS, Birchler JA, **Bilinski P**, **Stitzer MC**, **Ross-Ibarra J**, Flint-Garcia S, Chen X, Springer NM, Doebley JF (2019). Hybrid decay: a transgenerational epigenetic decline in vigor and viability triggered in backcross populations of teosinte with maize. *GENETICS* 213: 143-160 [4]
82. **O'Brien AM[§]**, Sawers RJH, Strauss SY, **Ross-Ibarra J[§]** (2019). Adaptive phenotypic divergence in teosinte differs across biotic contexts. *EVOLUTION* 73: 2230-2246 [7]
81. Gonzalez-Segovia E, Pérez-Limon S, Cántora-Martínez C, Guerrero-Zavala A, Jansen G, Hufford MB, **Ross-Ibarra J**, Sawers RJH (2019). Characterization of introgression from the teosinte *Zea mays* ssp. *mexicana* to Mexican highland maize. *PEERJ* 7: e6815. [9]
80. **Josephs EM[§]**, Berg JJ, **Ross-Ibarra J**, Coop G (2019) Detecting adaptive differentiation in structured populations with genomic data and common gardens. *GENETICS* 211: 989-1004. [25]
79. **Stetter MG[§]**, Thornton K, **Ross-Ibarra J[§]** (2018) Genetic architecture and selective sweeps after polygenic adaptation to distant trait optima. *PLOS GENETICS* 14(11): e1007794. [25]
78. **O'Brien A[§]**, Sawers R, **Ross-Ibarra J**, Strauss SY[§] (2018) Evolutionary responses to conditionality in species interactions across environmental gradients. *AMERICAN NATURALIST* 192(6): 715-730. [19]
77. **Stitzer MC[§]**, **Ross-Ibarra J** (2018) Maize domestication and gene interaction. *NEW PHYTOLOGIST* 220:395-408 [35]
76. Manchanda N, Snodgrass SJ, **Ross-Ibarra J**, Hufford MB (2018) Evolution and adaptation in the maize genome. In *THE ZEA MAYS GENOME*, Bennetzen, Flint-Garcia, Hirsch, Tuberosa (Eds.), Springer Nature Publishing *In Press* [2]
75. **Lorant A**, **Ross-Ibarra J**, Maud Tenaillon (2018) Genomics of long- and short- term adaptation in maize and teosinte. In *STATISTICAL POPULATION GENOMICS*, Dutheil (Ed.), Springer Nature Publishing *In Press* [2]
74. Dawe RK, Lowry EG, Gent J, **Stitzer MC**, Higgins DM, **Ross-Ibarra J**, Wallace JG, Kanizay L, Alabady M, Wang N, Gao Z, Birchler J, Harkess AE, Hodges AL, Hiatt EN (2018) A novel maize kinesin causes neocentromere activity and meiotic drive, altering inheritance patterns across the genome. *CELL* 173:

839-850. [54]

73. Aburto-Oropeza O, Johnson A, Agha M, Allen E, Allen M, González JA, Arenas-Moreno DM, Beas R, Butterfield H, Caetano G, Caselle J, Casteñada Gaytán G, Castorani MCN, Anh Cat L, Cavanaugh K, Chambers JQ, Cooper RD, Arafeh-Dalmau N, Dawson T, Diaz de la Vega A, DiMento JFC, Domínguez S, Edwards M, Ennen J, Estrada-Medina H, Fierro N, Gadsden H, Galina-Tessaro P, Gibbons P, Goode EV, Gorris ME, Harmon T, Hecht SB, Heredia Fragoso MA, Hernández-Solano A, Hernández-Cortés D, Hernández-Carmona G, Hillard S, Huey RB, Hufford MB, Pàramo Figueroa VH, Jenerette D, Jiménez-Osornio J, López-Nava KJ, Lara R, Leslie H, Lopez-Feldman A, Luja V, Martínez-Méndez N, Mautz W, Medellín-Azuara J, Meléndez-Torres C, de la Cruz FRM, Micheli F, Miles D, Montagner G, Montaña-Moctezuma G, Müller J, Oliva P, Ortinez A, Ortiz Partida JP, Palleiro-Nayar J, Parnell PE, Raimondi P, Ramirez A, Randerson JT, Reed DC, Riquelme M, Torres TR, Rosen PC, **Ross-Ibarra J**, Sanchez-Cordero V, Sandoval-Solis S, Santos J, Sawers R, Sinervo B, Sites J, Sosa-Nishizaki O, Stanton T, Stapp J, Stewart J, Torre J, Torres-Moye G, Treseder KK, Valdez-Villavicencio JH, Jiménez FIV, Vaughn M, Welton L, Westphal MF, Woolrich-Piña G, Yunez-Naude A, Zertuche-González JA, Taylor JE (2018) Harnessing Cross-border Resources to Confront Climate Change. *ENVIRONMENTAL SCIENCE AND POLICY In Press*. [6]
72. **Bilinski P[§]**, Albert P, Berg JJ, Birchler JA, Grote M, **Lorant A**, **Quezada J[†]**, Swarts, K, **Yang J**, **Ross-Ibarra J[§]** (2018) Parallel altitudinal clines reveal adaptive evolution of genome size in *Zea mays*. *PLOS GENETICS* 14: e1007162 [60]
71. **Mei W**, **Stetter MG**, **Gates DJ**, **Stitzer MC**, **Ross-Ibarra J[§]** (2018) Adaptation in plant genomes: bigger is different. *AMERICAN JOURNAL OF BOTANY* 105: 16-19 [33]
70. Bukowski R, Guo X, Lu Y, Zou C, He B, Rong Z, Wang B, Xu D, Yang B, Xie C, Fan L, Gao S, Xu X, Zhang G, Li Y, Jiao Y, Doebley J, **Ross-Ibarra J**, **Lorant A**, **Buffalo V**, Romay MC, Buckler ES, Ware D, Lai J, Sun Q, Xu Y (2017) Construction of the third generation *Zea mays* haplotype map. *GIGASCIENCE* gix134 [143]
69. Wang L, **Beissinger TM**, **Lorant A**, **Ross-Ibarra C**, **Ross-Ibarra J[§]**, Hufford MB[§] (2017) The interplay of demography and selection during maize domestication and diffusion. *GENOME BIOLOGY* 18:215 [92]
68. **Yang J[§]**, **Mezmouk S***, Baumgarten A, Buckler ES, Guill KE, McMullen MD, Mumm RH, **Ross-Ibarra J[§]** (2017) Incomplete dominance of deleterious alleles contribute substantially to trait variation and heterosis in maize. *PLOS GENETICS* 13:e1007019 [67]
67. **Lorant A**, Pedersen S, Holst I, Hufford MB, Winter K, Piperno D, **Ross-Ibarra J[§]** (2017) The potential role of genetic assimilation during maize domestication. *PLOS ONE* 12:e0184202 [13]
66. Aguilar-Rangel MR, Chàvez Montes RA, Gonzalez-Segovia E, **Ross-Ibarra J**, Simpson JK, Sawers RJH (2017) Allele specific expression analysis identifies regulatory variation associated with stress-related genes in the Mexican highland maize landrace Palomero Toluqueño. *PEERJ* 5:e3737 [12]
65. **Stetter MG[§]**, **Gates DJ**, **Mei W**, **Ross-Ibarra J[§]** (2017) How to make a domesticate. *CURRENT BIOLOGY* 27:R896-R900 [29]
64. Swarts K, Gutaker RM, Schuenemann V, Benz B, Blake M, Bukowski R, Holland J, Kruse-Peebles M, Lepak N, Matson RG, Prim L, Romay C, **Ross-Ibarra J**, Sanchez J, Schmidt C, Sofro E, Krause J, Weigel D, Buckler ES, Burbano HA (2017) Genomic estimation of complex traits reveals ancient

maize adaptation to temperate North America. *SCIENCE* 357:512-515 [95]

63. **Bilinski P[§]**, Han Y, **Hufford MB**, **Lorant A**, Zhang P, Jiang J, **Ross-Ibarra J[§]** (2017) Genomic abundance is not predictive of tandem repeat localization in grass genomes. *PLoS ONE* 12:e0177896 [7]
62. Jiao Y, Peluso P, Shi J, Liang T, **Stitzer MC**, Wang B, Campbell M, Stein JC, Wei X, Chin C-S, Guill K, Regulski M, Kumari S, Olson A, Gent J, Schneider KL, Wolfgruber TK, May MR, Springer N, Antoniou E, McCombie R, Presting GG, McMullen M, **Ross-Ibarra J**, Dawe RK, Hastie A, Rank DR, Ware D (2017) Improved maize reference genome with single-molecule technologies. *NATURE* 546:524-527 [597]
61. **Renny-Byfield S[§]**, Rodgers-Melnick E, **Ross-Ibarra J[§]** (2017) Gene fractionation and function in the ancient subgenomes of maize. *MBE* 34:1825-1832 [37]
60. **Velasco D**, Aradhya M, and **Ross-Ibarra J[§]** (2016) Evolutionary genomics of peach and almond domestication. *G3* 6:3985-3993 [22]
59. Ramos-Madrigal J, Smith BD, Moreno-Mayar JV, Gopalakrishnan S, **Ross-Ibarra J**, Gilbert MTP, Wales N (2016) Genome sequence of a 5310-year-old maize cob provides insights into the early stages of maize domestication. *CURRENT BIOLOGY* 26:3195-3201 [22]
58. **Durvasula A^{‡*}**, Hoffman PJ*, **Kent TV[‡]**, Liu C, Kono TJY, Morrell PL[§], **Ross-Ibarra J[§]** (2016) ANGSD-wrapper. *MOLECULAR ECOLOGY RESOURCES* 16:1449-1454 [11]
57. **Beissinger TM[§]**, Wang L, **Crosby K**, **Durvasula A[‡]**, Hufford MB, **Ross-Ibarra J[§]** (2016) Recent demography drives changes in linked selection across the maize genome. *NATURE PLANTS* 2:16084 [84]
56. Wolfgruber TK, Nakashima MM, Schneider KL, Sharma A, Xie Z, Albert PS, Xu R, **Bilinski P**, Dawe RK, **Ross-Ibarra J**, Birchler JA, Presting G (2016) High quality maize centromere 10 sequence reveals evidence of frequent recombination events. *FRONTIERS IN PLANT SCIENCE* 7 [22]
55. Orozco-Ramírez Q, Santacruz-Varela A, **Ross-Ibarra J**, Brush B (2016) Maize diversity associated with social origin and environmental variation in southern Mexico. *HEREDITY* 116:477-484. [40]
54. Gerke JP[§], Edwards JW, Guill KE, **Ross-Ibarra J[§]**, McMullen MD. The genomic impacts of drift and selection for hybrid performance in maize (2015). *GENETICS* 201: 1201-1211 [33]
53. Sosso D, Luo D, Li Q-B, Sasse J, **Yang J**, Gendrot G, Suzuki M, Koch KE, McCarty DR, Chourey PS, Rogoswsky PM, **Ross-Ibarra J**, Yang B, Frommer WB (2015) Seed filling in domesticated maize and rice depends on SWEET-mediated hexose transport. *NATURE GENETICS* 47:1489-1493 [186]
52. **Takuno S**, Ralph P, Swarts K, Elshire RJ, Glaubitz JC, Buckler ES, **Hufford MB**, **Ross-Ibarra J[§]** (2015) Independent molecular basis of convergent highland adaptation in maize. *GENETICS* 200:1297-1312 [57]
51. **Vann LE**, **Kono T**, **Pyhäjärvi T**, **Hufford MB[§]**, **Ross-Ibarra J[§]** (2015) Natural variation in teosinte at the domestication locus *teosinte branched1* (*tb1*). *PEERJ* 3:e900 [11]

50. Hake S, **Ross-Ibarra J** (2015) Genetic, evolutionary and plant breeding insights from the domestication of maize. *ELIFE* 2015;4:e05861 [52]
49. Fonseca RR, Smith B, Wales N, Cappellini E, Skoglund P, Fumagalli M, Samaniego JA, Caroe C, Avila-Arcos MC, Hufnagel D, Korneliussen TS, Vieira FG, Jakobsson M, Arriaza B, Willerslev E, Nielsen R, Hufford MB, Albrechtsen A, **Ross-Ibarra J**, Gilbert MT (2015) The origin and evolution of maize in the American Southwest. *NATURE PLANTS* 1:14003 [120]
48. Dyer GA, López-Feldman A, Yúnez-Naude A, Taylor JE, **Ross-Ibarra J** (2015) Reply to Brush *et al.*: A wake up call for crop conservation science. *PNAS* 112 (1), E2-E2 (letter). [8]
47. Makarevitch I, Waters M, West P, **Stitzer M**, **Ross-Ibarra J**, Springer NM (2015) Mobile elements contribute to activation of genes in response to abiotic stress. *PLOS GENETICS* 11 (1): e1004915. [279]
46. Tiffin P, **Ross-Ibarra J** (2014) Advances and limits of using population genetics to understand local adaptation. *TRENDS IN ECOLOGY AND EVOLUTION* 29:673-680 [254]
45. **Bilinski P**, **Distor KD**, **Gutierrez-Lopez J**, **Mendoza Mendoza G**, Shi J, Dawe RK, **Ross-Ibarra J**^S (2014) Diversity and evolution of centromere repeats in the maize genome. *CHROMOSOMA* 0009-5915 [17]
44. **Mezmouk S**, **Ross-Ibarra J**^S (2014) The pattern and distribution of deleterious mutations in maize. *G3* 4:163-171 [67]
43. Waters AJ, **Bilinski P**, Eichten SR, Vaughn MW, **Ross-Ibarra J**, Gehring M, Springer NM (2013) Comprehensive analysis of imprinted genes in maize reveals allelic variation for imprinting and limited conservation with other species. *PNAS* 110:19639-19644 [97]
42. **Pyhäjärvi T**, **Hufford MB**, **Mezmouk S**, **Ross-Ibarra J**^S (2013) Complex patterns of local adaptation in teosinte. *GENOME BIOLOGY AND EVOLUTION* 5: 1594-1609 [125]
41. Wills DM, Whipple C, **Takuno S**, Kursel LE, Shannon LM, **Ross-Ibarra J**, Doebley JF (2013) From many, one: genetic control of prolificacy during maize domestication. *PLOS GENETICS* 9(6): e1003604. [91]
40. McCouch S, Baute GJ, Bradeen J, Bramel P, Bretting PK, Buckler E, Burke JM, Charest D, Cloutier S, Cole G, Dempewolf H, Dingkuhn M, Feuillet C, Gepts P, Grattapaglia D, Guarino L, Jackson S, Knapp S, Langridge P, Lawton-Rauh A, Lijua Q, Lusty C, Michael T, Myles S, Naito K, Nelson RL, Pontarollo R, Richards CM, Rieseberg L, **Ross-Ibarra J**, Rounsley S, Hamilton RS, Schurr U, Stein N, Tomooka N, van der Knaap E, van Tassel D, Toll J, Valls J, Varshney RK, Ward J, Waugh R, Wenzl P, Zamir. (2013) Agriculture: Feeding the future. *NATURE* 499:23-24 [402]
39. **Hufford MB**, Lubinsky P, **Pyhäjärvi T**, **Devenganzo MT**[†], Ellstrand NC, **Ross-Ibarra J**^S (2013) The genomic signature of crop-wild introgression in maize. *PLOS GENETICS* 9(5): e1003477. [262]
38. **Provance MC**^S, Garcia Ruiz I, **Thommes C**[†], **Ross-Ibarra J** (2013) Population genetics and ethnobotany of cultivated *Diospyros riojae* Gómez Pompa (Ebenaceae), an endangered fruit crop from Mexico. *GENETIC RESOURCES AND CROP EVOLUTION* 60: 2171-2182. [7]

37. Melters DP*, Bradnam KR*, Young HA, Telis N, May MR, Ruby JG, Sebra R, Peluso P, Eid J, Rank D, Fernando Garcia J, DeRisi J, Smith T, Tobias C, **Ross-Ibarra J**[§], Korf IF[§], Chan SW-L. (2013) Patterns of centromere tandem repeat evolution in 282 animal and plant genomes. *GENOME BIOLOGY* 14:R10 [271]
36. Kanizay LB, **Pyhäjärvi T**, Lowry E, **Hufford MB**, Peterson DG, **Ross-Ibarra J**, Dawe RK (2013) Diversity and abundance of the Abnormal chromosome 10 meiotic drive complex in *Zea mays*. *HEREDITY* 110: 570-577. [20]
35. **Hufford MB**, Bilinski P, **Pyhäjärvi T**, **Ross-Ibarra J**[§] (2012) Teosinte as a model system for population and ecological genomics. *TRENDS IN GENETICS* 12:606-615 [61]
34. Muñoz Diez C, Vitte C, **Ross-Ibarra J**, Gaut BS, Tenaillon MI (2012) Using nextgen sequencing to investigate genome size variation and transposable element content. In Grandbastien M-A, Casacuberta JM, editors. *TOPICS IN CURRENT GENETICS v24: Plant Transposable Elements - Impact on Genome Structure & Function*. pp. 41-58 [21]
33. **van Heerwaarden J**[§], **Hufford MB**, **Ross-Ibarra J**[§] (2012) Historical genomics of North American maize. *PNAS* 109: 12420-12425 [136]
32. Swanson-Wagner R, Briskine R, Schaefer R, **Hufford MB**, **Ross-Ibarra J**, Myers CL, Tiffin P, Springer NM. Reshaping of the maize transcriptome by domestication. (2012). *PNAS* 109: 11878-11883 [123]
31. **Hufford MB***, Xun X*, **van Heerwaarden J***, **Pyhäjärvi T***, Chia J-M, Cartwright RA, Elshire RJ, Glaubitz JC, Guill KE, Kaeppler S, Lai J, Morrell PL, Shannon LM, Song C, Spinger NM, Swanson-Wagner RA, Tiffin P, Wang J, Zhang G, Doebley J, McMullen MD, Ware D, Buckler ES[§], Yang S[§], **Ross-Ibarra J**[§] (2012) Comparative population genomics of maize domestication and improvement. *NATURE GENETICS* 44:808-811 [671]
30. Chia J-M*, Song C*, Bradbury P, Costich D, de Leon N, Doebley JC, Elshire RJ, Gaut BS, Geller L, Glaubitz JC, Gore M, Guill KE, Holland J, **Hufford MB**, Lai J, Li M, Liu X, Lu Y, McCombie R, Nelson R, Poland J, Prasanna BM, **Pyhäjärvi T**, Rong T, Sekhon RS, Sun Q, Tenaillon M, Tian F, Wang J, Xu X, Zhang Z, Kaeppler S, **Ross-Ibarra J**, McMullen M, Buckler ES, Zhang G, Xu Y, Ware, D (2012) Maize HapMap2 identifies extant variation from a genome in flux. *NATURE GENETICS* 44:803-807 [543]
29. Fang Z, **Pyhäjärvi T**, Weber AL, Dawe RK, Glaubitz JC, Sánchez González J, **Ross-Ibarra C**, Doebley J, Morrell PL[§], **Ross-Ibarra J**[§] (2012) Megabase-scale inversion polymorphism in the wild ancestor of maize. *GENETICS* 191:883-894 [91]
28. Cook JP, McMullen MD, Holland JB, Tian F, Bradbury P, **Ross-Ibarra J**, Buckler ES, Flint-Garcia SA (2012) Genetic architecture of maize kernel composition in the Nested Association Mapping and Inbred Association panels. *PLANT PHYSIOLOGY* 158: 824-834 [293]
27. Morrell PL, Buckler ES, **Ross-Ibarra J**[§] (2012) Crop genomics: advances and applications. *NATURE REVIEWS GENETICS* 13:85-96 [424]
26. Studer A, Zhao Q, **Ross-Ibarra J**, Doebley J (2011) Identification of a functional transposon insertion in the maize domestication gene *tb1*. *NATURE GENETICS* 43:1160-1163. [505]

25. **van Heerwaarden J[§]**, Doebley J, Briggs WH, Glaubitz JC, Goodman MM, Sánchez González JJ, **Ross-Ibarra J[§]** (2011) Genetic signals of origin, spread and introgression in a large sample of maize landraces. *PNAS* 108: 1088-1092 [336]
24. **Hufford MB[§]**, Gepts P, **Ross-Ibarra J** (2011) Influence of cryptic population structure on observed mating patterns in the wild progenitor of maize (*Zea mays* ssp. *parviglumis*). *MOLECULAR ECOLOGY* 20: 46-55 [22]
23. Tenaillon MI, **Hufford MB**, Gaut BS, **Ross-Ibarra J[§]** (2011) Genome size and TE content as determined by high-throughput sequencing in maize and *Zea luxurians*. *GENOME BIOLOGY AND EVOLUTION* 3: 219-229 [168]
22. Eckert AJ, **van Heerwaarden J**, Wegrzyn JL, Nelson CD, **Ross-Ibarra J**, González-Martínez SC, and Neale DB (2010) Patterns of population structure and environmental associations to aridity across the range of loblolly pine (*Pinus taeda* L, Pinaceae). *GENETICS* 185: 969-982 [351]
21. Fuchs EJ, **Ross-Ibarra J[§]**, Barrantes G (2010) Reproductive biology of *Macleania rupestris*: a pollen-limited Neotropical cloud-forest species in Costa Rica. *JOURNAL OF TROPICAL ECOLOGY* 26: 351-354 [13]
20. Whitney KD, Baack EJ, Hamrick JL, Godt MJW, Barringer BC, Bennett MD, Eckert CG, Goodwillie C, Kalisz S, Leitch I, **Ross-Ibarra J** (2010) A role for nonadaptive processes in plant genome size evolution? . *EVOLUTION* 64: 2097-2109 [75]
19. **van Heerwaarden J**, **Ross-Ibarra J[§]**, Doebley J, Glaubitz JC, Sánchez González J, Gaut BS, Eguiarte LE (2010) Fine scale genetic structure in the wild ancestor of maize (*Zea mays* ssp. *parviglumis*). *MOLECULAR ECOLOGY* 19: 1162-1173 [43]
18. Shi J, Wolf S, Burke J, Presting G, **Ross-Ibarra J**, Dawe RK (2010) High frequency gene conversion in centromere cores. *PLoS BIOLOGY* 8: e1000327 [112]
17. Hollister JD, **Ross-Ibarra J**, Gaut BS (2010) Indel-associated mutation rate varies with mating system in flowering plants. *MOLECULAR BIOLOGY AND EVOLUTION* 27: 409-416. [39]
16. **van Heerwaarden J**, van Eeuwijk FA, **Ross-Ibarra J** (2010) Genetic diversity in a crop metapopulation. *HEREDITY* 104: 28-39 [43]
15. Gore MA*, Chia JM*, Elshire RJ, Sun Q, Ersoz ES, Hurwitz BL, Peiffer JA, McMullen MD, Grills GS, **Ross-Ibarra J**, Ware D, Buckler ES (2009) A first-generation haplotype map of maize. *SCIENCE* 326: 1115-1117. [745]
14. **May MR[‡]**, **Provance MC**, Sanders AC, Ellstrand NC, **Ross-Ibarra J[§]** (2009) A pleistocene clone of Palmer's Oak persisting in Southern California. *PLoS ONE* 4: e8346. [31]
13. Zhang LB, Zhu Q, Wu ZQ, **Ross-Ibarra J**, Gaut BS, Ge S, Sang T (2009) Selection on grain shattering genes and rates of rice domestication. *NEW PHYTOLOGIST* 184: 708-720. [139]
12. **Ross-Ibarra J**, Tenaillon M, Gaut BS (2009) Historical divergence and gene flow in the genus *Zea*. *GENETICS* 181: 1399-1413. [176]

11. **Ross-Ibarra J***, Wright SI*, Foxe JP, Kawabe A, DeRose-Wilson L, Gos G, Charlesworth D, Gaut BS (2008) Patterns of polymorphism and demographic history in natural populations of *Arabidopsis lyrata*. PLoS ONE 3: e2411. [178]
10. Lockton S, **Ross-Ibarra J**, Gaut BS (2008) Demography and weak selection drive patterns of transposable element diversity in natural populations of *Arabidopsis lyrata*. PNAS 105: 13965-13970. [82]
9. **Ross-Ibarra J^S**, Gaut BS (2008) Multiple domestications do not appear monophyletic. PNAS 105: E105 (letter). [22]
8. Gaut BS, **Ross-Ibarra J** (2008) Selection on major components of angiosperm genomes. SCIENCE 320: 484-486. [73]
7. **Ross-Ibarra J**, Morrell PL, Gaut BS (2007) Plant domestication, a unique opportunity to identify the genetic basis of adaptation. PNAS 104 Suppl 1: 8641-8648. [374]
6. **Ross-Ibarra J^S** (2007) Genome size and recombination in angiosperms: a second look. JOURNAL OF EVOLUTIONARY BIOLOGY 20: 800-806. [32]
5. Wares JP, Barber PH, **Ross-Ibarra J**, Sotka EE, Toonen RJ (2006) Mitochondrial DNA and population size. SCIENCE 314: 1388-90 (letter). [34]
4. **Ross-Ibarra J^S** (2005) QTL and the study of plant domestication. GENETICA 123: 197-204. [35]
3. **Ross-Ibarra J^S** (2004) The evolution of recombination under domestication: a test of two hypotheses. AMERICAN NATURALIST 163: 105-112. [86]
2. **Ross-Ibarra J** (2003) Origen y domesticación de la chaya (*Cnidoscolus aconitifolius* Mill IM Johnst): La espinaca Maya (*Cnidoscolus aconitifolius* Mill I. M. Johnst): Mayan spinach. MEXICAN STUDIES 19: 287-302. [26]
1. **Ross-Ibarra J^S**, Molina-Cruz A (2002) The ethnobotany of Chaya (*Cnidoscolus aconitifolius* ssp. *aconitifolius* Breckon): A nutritious Maya vegetable. ECONOMIC BOTANY 56: 350-365. [116]
- o. Neel MC, **Ross-Ibarra J**, Ellstrand NC (2001) Implications of mating patterns for conservation of the endangered plant *Eriogonum ovalifolium* var. *vineum*. AMERICAN JOURNAL OF BOTANY 88: 1214-1222. [34]