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Educational History:

<u>Name of Institution</u>	<u>Years</u>	<u>Major</u>	<u>Degree</u>
University of Minnesota	1988-1992	Plant Breeding	Ph.D
University of Minnesota	1986-1988	Plant Breeding	M.S.
Brigham Young University	1980-1986	Agronomy	B.S.

Professional Positions:

<u>Employer</u>	<u>Years</u>	<u>Position</u>
BYU College of Life Sciences	2015-2022	Associate Dean
BYU Plant & Wildlife Sciences	2012-2015	Department Chair
BYU Plant & Wildlife Sciences	1996-present	Professor (tenure-track)
USDA-ARS, PSERU	1992-1996	Research Geneticist (Postdoctoral)

Professional Organizations and Honor Societies:

Crop Science Society of America	Phi Kappa Phi	Sigma Xi
American Oat Workers	International Oat Workers	

Professional Service and Awards:

Karl G. Maeser Distinguished Faculty Lecturer, BYU, 2023-2024
Member, Fulbright Specialist Roster, 2021-2025
Fulbright Scholar, 2023 (Argentina, University of Buenos Aires, Faculty of Agronomy)
Chair, International Oat Nomenclature Committee, 2021-present
Distinguished International Guest Lecturer and Thesis Advisor, UNSA, Arequipa, Peru, 2019
International Advisor, UN-FAO quinoa introduction project, Demerara, Guyana, 2017-2019
Co-Chair, American Oat Workers, 2018-2022
Editorial Board Member, *PLoS One* and *Crops*
Co-Chair, Plant & Animal Genome Conference Oat Workshop, 2016-present

Research Interests:

Elucidation of evolutionary origins and relationships of oat (*Avena*) and quinoa (*Chenopodium*) with their wild relatives. My basic research focus is on the effects of polyploidy and how/why these genera accumulate chromosome structural variation. I use teams of student researchers to generate this information, which I then mobilize for applied and humanitarian research in the improvement of these crops through traditional and molecular breeding approaches using wild genetic resources and in collaboration with oat geneticists, breeders, physiologists, and farmers in 13 countries. Key traits that we target for improvement include environmental stress tolerance and nutritional characteristics. See <https://pws.byu.edu/orphaned-crops>.

Publications in Critically Reviewed Journals and Proceedings:

(Scopus h-index = 33; 5111 Google citations, Google h-index = 43, Google i10-index = 82)

#BYU graduate student, ^BYU undergraduate

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Wight CP, Blake VC, **Jellen EN**, Yao E, Sen TZ, Tinker NA (2024) One hundred years of comparative genetic and physical mapping in cultivated oat (*Avena sativa* L.), *Crop and Pasture Science* 75, CP23246, <https://doi.org/10.1071/CP23246>

Rey E, Maughan PJ, Maumus F, Lewis D, Wilson L, Fuller J, Schmöckel SM, **Jellen E**, Tester M, Jarvis DE (2023) A chromosome-scale assembly of the quinoa genome provides insights into the structure and dynamics of its subgenomes, *Communications Biology* 6:1263, <https://doi.org/10.1038/s42003-023-05613-4>

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#Young LA, Maughan PJ, Jarvis DE, #Hunt SP, ^Warner HC, ^Durrant KK, ^Kohlert T, Curti RN, Bertero D, Filippi GA, Pospíšilíková T, Krak K, Mandák B, **Jellen EN** (2023) A chromosome-scale reference of *Chenopodium watsonii* helps elucidate relationships within North American A-genome *Chenopodium* species and with quinoa, *The Plant Genome* 16(3):e20349, <https://doi.org/10.1002/tpg2.20349>

Allaoui A, **Jellen EN**, Thiam EH, Benlhabib O (2023) Evaluation of *Chenopodium quinoa* x *C. berlandieri* recombinant inbred lines (RILs) for heat tolerance, *Chilean Journal of Agricultural Research* 83(3):260-271, <https://doi.org/10.4067/S0718-58392023000300260>

Allaoui A, **Jellen EN**, Benlhabib O (2022) Caractérisation agro-morpho-phenologique de lignées IRL-3, -4, et -5 de quinoa (*Chenopodium quinoa* Willd.), *Revue Marocaine de Sciences Agronomiques et Veterinaires* 10(1):51-58.

Robbins MD, Bushman BS, Huff DR, Benson CW, Warnke SE, ^Maughan CA, **Jellen EN**, Johnson PG, Maughan PJ (2022) Chromosome-scale Genome Assembly and Annotation of Allotetraploid Annual Bluegrass (*Poa annua* L.), *Genome Biology and Evolution*, <https://doi.org/10.1093/gbe/evac180>

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Kamal N, Tsardakas Renhuldt N, Bentzer J, Gundlach H, Haberer G, Juhasz A, Lux T, Bose U, TyeDin J, Lang D, van Gessel N, Reski R, Spegel P, Ceplitis A, Himmelbach A, Bekele WA, Colgrave M, Hansson M, Stein N, Mayer K, **Jellen EN**, Maughan PJ, Tinker NA, Mascher M, Olsson O, Spannagl M, Sirijovski N (2022) A healthy cereal crop like no other: the mosaic genome of hexaploid oat, *Nature* 606:113-119

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#Stettler JM, Stevens MR, Meservey LM, ^Crump WW, ^Grow JD, Porter SJ, Love SL, Maughan PJ, **Jellen EN** (2021) Improving phylogenetic resolution of the Lamiales using complete plastome sequences of six *Penstemon* species, *PLoS ONE* Dec 15, <https://doi.org/10.1371/journal.pone.0261143>, 1-18

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#Fogarty MC, Smith SM, Sheridan JL, Hu G, Islamovic E, Reid R, Jackson EW, Maughan PJ, **Jellen EN**, Hsieh T-F (2020) Identification of mixed linkage β -glucan quantitative trait loci and evaluation of CsIF6 homoeologs in hexaploid oat. *Crop Science* 60:914-933

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#Raney JA, ^Reynolds DJ, Elzinga DB, ^Page J, Udall JA, **Jellen EN**, Bonifacio A, Fairbanks DJ, Maughan PJ (2014) Transcriptome analysis of drought induced stress in *Chenopodium quinoa*. *American Journal of Plant Sciences* 5:338-357

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Jellen EN, Phillips RL, Rines HW (1993) C-banded karyotypes and polymorphisms in hexaploid oat accessions (*Avena* spp.) using Wright's stain. *Genome* 36:1129-1137

Terry RE, **Jellen EN**, Breakwell DP (1986) Effect of irrigation method and acetylene exposure on field denitrification measurements. *Soil Science Society of America Journal* 50:115-120

Other Critically Reviewed Publications:

Curti RN, Ortega-Baes P, Sajama J, Jarvis D, **Jellen EN**, Tester M, Bertero D (2023) Chapter 8: Exploration and collection of quinoa's wild ancestor in Argentina. *In: Biosaline Agriculture as a Climate Change Adaptation for Food Security*, pp 167-178. Choukr-Allah R, Ragab R, eds.

Rojas-Beltran JA, Rojas-Vargas EL, Mujica A, **Jellen EN** (2022) Chapter 7: El genoma de la quinua. *In: La Quinoa, El Grano Sagrado de los Incas*, pp 193-246. Beltran JA, Ren G, Mujica A, eds.

Rojas-Beltran JA, Gandarillas C, Mujica A, Herbas J, **Jellen E**, Maughan J, Alanoca C, Rojas-Vargas EL (2022) Chapter 14: Variedades tropicales de quinua en Bolivia. *In: La Quinoa, El Grano Sagrado de los Incas*, pp 385-402. Beltran JA, Ren G, Mujica A, eds.

Jellen EN, Jarvis DE, Benet-Pierce N, Maughan PJ (2021) Chapter 3: Botanical context for domestication in North America. *In: The Quinoa Genome*, pp 33-49. *Compendium of Plant Genomes*. Schmoeckel S, ed., Springer Nature, Cham Switzerland.

Fernando S, **Jellen EN**, Lewis K, Scanlin L (2021) Gluten-free ancient grains, *In Ancient Grains of the Great Plains Handbook*, Ch 3, Northern Crops Institute, Fargo, pp 22-42.

Murphy KM, Matanguihan JB, Fuentes FF, Gomez-Pando LR, **Jellen EN**, Maughan PJ, Jarvis DE (2019) Quinoa breeding and genomics. *In: Goldman I (ed). Plant Breeding Reviews*, 1st Ed., John Wiley & Sons.

Jellen EN (2016) C-banding of plant chromosomes. *In: Kianian SF and Avoles Kianian PM (ed). Plant Cytogenetics: Methods and Protocols. Methods in Molecular Biology*, Springer, New York, NY. Pp 1-6. doi: 10.1007/978-1-4939-3622-9_1.

Jellen EN, Jackson EW, Maughan PJ (2016) Oat improvement and innovation using wild genetic resources (Poaceae, *Avena* spp.): Elevating "oats" to a new level and stature. *In: Mason A (ed). Polyploidy and Hybridization for Crop Improvement*. CRC Press, Boca Raton, FL. Pp 364-376. Doi: 10.1201/9781315369259-15.

Matanguihan JB, Maughan PJ, **Jellen EN**, Kolano B (2015) Quinoa cytogenetics, molecular genetics, and diversity, Ch. 7. *In: Murphy K and Matanguihan J (ed). Quinoa Improvement and Sustainable Production*. John Wiley & Sons, Hoboken, NJ.

Maughan PJ, Udall JA, **Jellen EN** (2015) Genomic reduction assisted single nucleotide polymorphism discovery using 454-pyrosequencing. *In: Batley J (ed) Methods in Molecular Biology – Plant Genotyping*. Humana Press, Totowa, NJ.

Jellen EN, Maughan PJ, Fuentes F, Kolano B (2014) Botanica, filogenia y evolucion, Capitulo 1.1. *In: Bazile D, et al. (ed) Estado del Arte de la Quinoa en el Mundo en 2013: FAO and CIRAD*, Santiago, Chile and Montpellier, France.

Maughan PJ, **Jellen EN**, #Raney JA (2014) Herramientas moleculares y genómicas para la quinua, Capitulo 1.2. In Bazile D, et al. (ed) Estado del Arte de la Quinoa en el Mundo en 2013: FAO and CIRAD, Santiago, Chile and Montpellier, France.

Jellen EN, Maughan PJ, Bertero D, Munir H (2013) Prospects for Quinoa (*Chenopodium quinoa* Willd.) Improvement Through Biotechnology, Chapter 8. In Jain SM, Dutta Gupta S (ed) Biotechnology of Neglected and Underutilized Crops. Springer-Verlag, Berlin, Germany.

Jellen EN, Kolano BA, #Sederberg MC, Bonifacio A, Maughan PJ (2010) *Chenopodium*, Chapter 3. In Kole C (ed) Wild Crop Relatives: Genetic and Breeding Resources, Vol. 4. Springer-Verlag, Berlin, Germany.

Maughan PJ, Bonifacio A, Coleman CE, **Jellen EN**, Stevens MR, Fairbanks DJ (2006) Genomic investigations of quinoa (*Chenopodium quinoa*). In Genome Series: Vol 3: Pulses, Sugar and Tuber Crops.

Jellen EN, Leggett JM (2006) Cytogenetic Manipulation in Oat Improvement, Ch. 7. In Singh RJ, Jauhar PP (ed) Genetic Resources, Chromosome Engineering, and Crop Improvement, Vol. 2. Cereals. CRC Press, Boca Raton, FL, Ch. 6.

Peer-Reviewed Articles and Chapters Submitted or in Revision for Publication:

Maughan PJ, Jarvis DE, de la Cruz-Torres E, #Jaggi KE, ^Warner HC, ^Marcheschi AK, Bertero HD, Gomez-Pando L, Fuentes F, Mayta-Anco ME, Curti R, Tester M, **Jellen EN** (2024) Can North American pitseed goosefoot (*Chenopodium berlandieri*) be used to improve its Andean sister quinoa (*C. quinoa*)?, *Scientific Reports* (submitted 12-23)

Presentations (last 10 years; *invited presentation; #BYU grad student; ^BYU undergrad):

Wight CP, Blake VC, Jellen EN, Yao E, Sen TZ, Tinker NA (2024) An inventory of hexaploid oat genes and QTL: powdery mildew resistance as a use case, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (poster)

Kalt TK#, Hopkins B, Jarvis DE, Ioannou V^, **Jellen EN** (2024) Analysis of nitrogen accumulation and gene expression in seven cultivated and wild quinoas, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (poster)

Free A^, Maughan PJ, **Jellen EN**, Jarvis DE (2024) Genomic characterization of EMS-induced mutants in *Chenopodium quinoa*, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (poster)

Torres K#, Bratsman S#, Gottfredson S#, Borgmeier A#, Cox B#, Evans RP, Frandsen PB, Hadfield R#, Jarvis DE, **Jellen EN**, Kokkonen A#, Linde J#, Lin YF#, Maughan PJ, Multford T#, Parker A#, Smith SM#, Young LA# (2024) Genome assembly of *Dysphania ambrosioides*, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (poster)

Marcheschi AK^, Maughan PJ, Jarvis DE, **Jellen EN** (2024) The genome of huauzontle (*Chenopodium berlandieri*), a North American relative of quinoa, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (poster)

Jaggi K#, **Jellen EN**, Jarvis DE, Krak K, Mandak B, Maughan PJ (2024) A pangenome for *Chenopodium*, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (talk)

Brady RC^, Roser RL^, Jaggi K#, Page J^, Maughan PJ, Jarvis DE, **Jellen EN** (2024) Development of quinoa x pitseed goosefoot populations: genomics and breeding compatibility, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 15 (poster)

Jellen EN*, Maughan PJ, Jarvis DE, Ramos Tarifa EG, Mayta Anco ME (2024) Genomic considerations in quinoa breeding via wide crossing with pitseed goosefoot (*Chenopodium berlandieri*), Plant & Animal Genome 31 Conference, San Diego, CA, Jan 13 (talk)

Moreau E, Moscou M, Maughan PJ, **Jellen EN**, Kianian SF (2024) Fine mapping oat crown rust resistance gene *Pc94* in *Avena strigosa*, Plant & Animal Genome 31 Conference, San Diego, CA, Jan 13 (talk)

Jarvis DE, Maughan PJ, **Jellen EN** (2023) Improving quinoa through the development of genetic and genomic resources, Slurm User Group Meeting, Provo, UT, Sep 12 (talk)

Jellen EN*, Maughan PJ, Bekele W (2023) Informed breeding in the age of the oat pangenome: theoretical and practical perspectives, 2nd Food Oats Conference, Lund, Sweden, Jun 19-21 (talk)

Maughan PJ, **Jellen EN**, Avni R, International PanOat Consortium (2023) PanOat – Empowering genomic exploration across *Avena*. 2nd Food Oats Conference, Lund, Sweden, Jun 19-21 (poster)

Jellen EN*, Jarvis D, Maughan J (2023) Recursos genómicos en la quinua, Instituto de Investigaciones en Recursos Naturales, Agroecología y Desarrollo Rural de la Universidad Nacional de Río Negro y CONICET, Bariloche, Argentina, Jun 13 (remote talk)

Jellen EN* (2023) Il Buono, Il Brutto, Il Cattivo: How genomic-assisted breeding can transform two Tucos (oats and quinoa) into the Blondies of the crop world, Universidad Nacional de Rosario Facultad de Agronomía, Argentina, May 24 (talk)

Jellen EN* (2023) Il Buono, Il Brutto, Il Cattivo: How genomic-assisted breeding can transform two Tucos (oats and quinoa) into the Blondies of the crop world, Universidad de Buenos Aires, Facultad de Agronomía, Argentina, May 19 (talk)

Jellen EN* (2023) Il Buono, Il Brutto, Il Cattivo: How genomic-assisted breeding can transform two Tucos (oats and quinoa) into the Blondies of the crop world, Universidad Nacional de Luján, Argentina, May 18 (talk)

Jellen EN*, Maughan J, Jarvis D (2023) Investigaciones genómicas y moleculares sobre la quinua (*Chenopodium quinoa*) y el huauzontle (*C. berlandieri*), Instituto de Genética y Biología Molecular, Buenos Aires, Argentina, May 4 (talk)

Jellen EN* (2023) The genome of *Chenopodium berlandieri* and its relationship to diploids and quinoa, Universidad Nacional de Salta, Argentina, March 17 (talk)

Jellen EN* (2023) The genome of *Chenopodium berlandieri* and its relationship to diploids and quinoa, Instituto Botánico del Nordeste (IBONE) y Universidad Nacional de Corrientes, Argentina, March 10 (talk)

Morris A, Rey E, Melino V, Xu J, **Jellen EN**, Jarvis DE, Maughan PJ, Bertero D, Tester MA (2023) Heat stress effects on in vitro pollen germination and pollen tube elongation in *Chenopodium quinoa* and wild relatives, Plant & Animal Genome Conference, San Diego, CA, Jan 14-18 (poster)

Jellen EN, #Smith S, Maughan PJ, Klos K, Avni R, Mascher M, Bitz L, Tinker N, Bekele W, Latta R (2023) The genome of AABB oats, Plant & Animal Genome Conference, San Diego, CA, Jan 14

Numerous authors including **Jellen EN** (2023) The highly rearranged reference genome of hexaploid oat marks a turning point in oat research and breeding, Plant & Animal Genome Conference, San Diego, CA, Jan 14

Maughan PJ, #Young L, Jarvis DE, #Hunt SP, ^Warner HC, ^Durrant KK, ^Kohlert T, Curti RN, Bertero D, Filippi GA, Pospisilikova T, Krak K, Mandak B, **Jellen EN** (2023) A chromosome-scale reference of *Chenopodium watsonii* helps elucidate relationships within North American A-genome *Chenopodium* species, Plant & Animal Genome Conference, San Diego, CA, Jan 14

^Warner HC, #Jaggi K, Maughan PJ, Jarvis DE, **Jellen EN** (2023) Evaluation of recombination and identification of hybrids in quinoa x pitseed goosefoot and quinoa x avian goosefoot F₂ populations, Plant & Animal Genome Conference, San Diego, CA, Jan 14-18 (poster)

Jellen EN, #Smith S, Maughan PJ, Klos K, Avni R, Mascher M, Bitz L, Tinker N, Bekele W, Latta R (2022) Whole-genome analysis of the AABB tetraploid oat species, 11th International Oat Conference, Perth, Australia, Oct 12 (remote)

Jellen EN, International Oat Nomenclature Committee (2022) 11th International oat genome, chromosome, and gene nomenclature, International Oat Conference, Perth, Australia, Oct 11 (poster, remote)

***Jellen EN** (2022) Genetics of crop domestication, Universidad de Buenos Aires graduate course: Plant Domestication & Archaeology, guest lecturer, Oct 31-Nov 1 (remote)

- Brenner DM, **Jellen EN** (2022) *Chenopodium* germplasm with deciduous seed coats from India, American Society of Agronomy Annual Meeting, Baltimore, MD, Nov 7
- Robbins MD, Warnke SE, Maughan PJ, Huff DR, Benson CW, **Jellen E**, Johnson PG, Koch MJ, Harriman R, Bushman BS (2022) Characterization of subgenomes and vernalization genes of *Poa annua* and *Poa pratensis* by genome sequencing and annotation, American Society of Agronomy Annual Meeting, Baltimore, MD, Nov 7
- ***Jellen EN**, Jarvis DE, Maughan PJ (2022) Origins of the quinoa complex and neodomestication of North American pitseed goosefoot through crossing with Andean quinoa, Leibniz Institute for Plant Genetics (IPK), Gatersleben, Germany, Jun 28
- ***Jellen EN** (2022) Quinoa and oats: improvement, redomestication, and neodomestication, Northern Crop Institute Ancient Grains Conference, Elk River, MN, Jul 20
- ***Jellen EN**, #Young L, Jarvis DE, Maughan PJ (2022) Caracterización de los subgenomas de la quinua (*Ch. quinoa*), Universidad Mayor de San Simón, Cochabamba, Bolivia, May 13 (remote)
- Jellen EN** (2021) Pitseed goosefoot: quinoa's widely adapted sister, International Day of Quinoa Consumption Webinar, Jul 7 (remote)
- ***Jellen EN**, Jarvis DE, Maughan PJ, ^Taylor J, ^Young L (2020) Genetic resources and breeding of goosefoots (including quinoa), International Quinoa Research Symposium, Pullman, WA, Aug 17-19 (remote)
- Maughan PJ, **Jellen EN**, Jarvis DE (2020) Amaranthaceae genomic resources – BYU, International Quinoa Research Symposium, Pullman, WA, Aug 17-19 (remote)
- ***Jellen EN**, Jarvis DE, #Hunt S, #Mangelsen H, Maughan PJ (2019) New seed collections of North American pitseed goosefoot and efforts to identify its diploid ancestors through whole-genome sequencing, VII International Quinoa & Andean Crops Congress, Iquique, Chile, Mar 25
- ***Jellen EN** (2019) Molecular genetics and genomics workshop, Universidad Nacional de San Agustín, Arequipa, Peru, Jun 10-14
- Jellen EN**, Maughan PJ, Schlueter J, Walstead R (2018) *Avena* genome sequencing: one reference genome – or many?, American Oat Worker's Conference, Seattle, WA, Jun 18-22
- Maughan PJ, Walstead RN, #Lee R, Schlueter J, Langdon T, Burkes S, Jackson E, **Jellen EN** (2019) Genome assembly and phylogenomics in diploid *Avena* species, Plant & Animal Genome Conference, San Diego, CA, Jan 13
- #Mangelsen H, Jarvis D, **Jellen EN**, Gomez L, Deza P, Raymond B, Murphy K, Maughan PJ (2019) Genome-wide association study for agronomic quality traits in *C. quinoa*, Plant & Animal Genome Conference, San Diego, CA, Jan 15 (poster)
- #Lee R, Maughan PJ, Langton T, Schlueter J, Jackson E, **Jellen EN** (2018) A reference-quality assembly and annotation of the *Avena atlantica* genome, Plant & Animal Genome Conference, San Diego, CA, Jan 14
- Jellen EN**, ^McLaughlin M, ^O'Brien JC, Maughan PJ, Bertero D, Curti R, Fuentes F, Tester M, Jarvis DE (2018) Phylogenetic inferences in New World-native *Chenopodium* allotetraploids from intron 16A sequence data of the *Salt Overly Sensitive 1* gene, Plant & Animal Genome Conference, San Diego, CA, Jan 16 (poster)
- ***Jellen EN**, Maughan PJ (2017) Oportunidades y desafíos ante el descubrimiento del genoma de la quinua, Bolivian Foreign Ministry and International Quinoa Center convocatorio especial, Jun 12
- Jarvis D, Shwen H, Lightfoot D, Schmoeckel S, Tester M, Maughan J, ***Jellen R**, van Loo R, Borm T, Murphy K (2017) Secuenciación del genoma de la quinua: los nuevos desafíos, Pontifical Catholic University of Chile, Santiago, April 12
- ***Jellen EN**, Maughan PJ (2017) Quinoa: the Meryl Streep of the Angiosperms: makeup, attributes, vulnerabilities, etc., of an "overrated" crop plant, UCLA Genomics & Bioinformatics Program seminar, Los Angeles, CA, Feb 13
- Jellen EN** (2017) Future directions for quinoa and its relatives, Plant & Animal Genome Conference, San Diego, CA, Jan 15
- Van Loo EN, Jarvis DE, Borm TJA, Yung Shwen H, Schmoeckel SM, **Jellen EN**, Kharbatia NM, Li B, Lightfoot DJ, Saber NO, Schijlen E, van der Linden CG, Maughan PJ, Tester MA (2017) The

chromosome scaffold based quinoa genome: its building and its use to find the non-bitter mutations in quinoa, Plant & Animal Genome Conference, San Diego, CA, Jan 13-18 (poster)

Maughan PJ, Ramaraj T, Jarvis DE, Lightfoot D, #Lee R, **Jellen EN** (2017) PacBio and Hi-C based proximity-guided assembly of amaranth (*A. hypochondriacus*) pseudo chromosomes, Plant & Animal Genome Conference, San Diego, CA, Jan 17 (poster)

Benlhabib O, Maughan PJ, Jacobsen S-E, **Jellen EN** (2016) Quinoa germplasm for Morocco, International Quinoa Conference, ICBA, Dubai, UAE, Dec 6-8

Murphy KM, Reeve JR, Creech E, Hinojosa L, Maughan PJ, **Jellen EN**, Kellogg J, Machado S, Ludvigson K, Schroeder KL, Finkelnburg D, Wu G, Ganjyal G, Ross C, Morris CF, Packer D (2016) Quinoa cultivation in western North America: lessons learned and the path forward, American Society of Agronomy Meeting, Phoenix, AZ, Nov 8

Jellen EN, Maughan J (2016) Defining a wild *Chenopodium* germplasm base for improving lowland quinoa, REDBIO Conference, Lima, Peru, Jul 27-29

Walstead RN, Whaley A, Reid R, Jay JJ, #Lee R, Sebra R, Langdon T, Sheridan J, Hayes A, Jackson E, **Jellen EN**, Maughan J, Brouwer C, Schlueter J (2016) Sequencing the genome of hexaploid oat, Plant & Animal Genome Conference, San Diego, CA, Jan 8-13 (poster)

^Chu AE, #Fogarty MC, Maughan PJ, Jackson EW, **Jellen EN** (2016) Homeoallelic variation in oat hemicellulose biosynthesis genes, Plant & Animal Genome Conference, San Diego, CA, Jan 8

Jellen EN, Maughan J, Bertero D (2015) Pitseed goosefoot (*Chenopodium berlandieri*), a tremendously valuable genetic resource for remediating production deficiencies in lowland subtropical and warm-season temperate quinoa (*C. quinoa*), EUCARPIA Protein Crops Conference, Pontevedra, Spain, May 6

***Jellen EN** (2015) Physical mapping of the oat genome, Federal University of Rio Grande do Sul, Porto Alegre, Brazil, April 8

^Clouse J, ^Page JT, Ramaraj T, Udall J, **Jellen EN**, Maughan PJ (2015) Genome assembly of *Amaranthus hypochondriacus*: an emerging C4 pseudo-cereal grain crop, Plant & Animal Genome Conference, San Diego, CA, Jan 12

^Dohse CA, #Fogarty MC, **Jellen EN** (2015) Characterization of CesaA6 in oat, Plant & Animal Genome Conference, San Diego, CA, Jan 12 (poster)

Numerous authors including **Jellen EN** (2015) Ode to an oat: theme and variations on a map, Plant & Animal Genome Conference, San Diego, CA, Jan 11

#Brown DC, Cepeda V, Maughan PJ, Palomino G, De la Cruz E, **Jellen EN** (2014) Molecular cloning and characterization of the granule-bound starch synthase gene *GBSS1* in Andean quinoa and Mexican huauzontle, Plant & Animal Genome Conference, San Diego, CA, Jan 10-15 (poster)

Numerous authors including **Jellen EN** (2014) The yellow brick road to a hexaploid oat zipper (OZ) – act I: linkage map construction, Plant & Animal Genome Conference, San Diego, CA, Jan 10

Numerous authors including **Jellen EN** (2014) The yellow brick road to a hexaploid oat zipper (OZ) – act II, Plant & Animal Genome Conference, San Diego, CA, Jan 10

Jellen EN, Maughan PJ (2013) Quinoa phylogenetic insights based on nuclear and chloroplast DNA sequences, International Quinoa Research Symposium, Pullman, WA, Aug 12-14

Jellen EN, Maughan J, Coleman C, Fairbanks D, Udall J (2013) The quinoa genetics program at BYU, SWUP-Med Conference, Agadir, Morocco, Mar 12

Jellen EN (2013) Oat rearrangements, North American Miller's Association Conference, Ottawa, Canada, Mar 7

Jellen EN, ^Arano I, Maughan PJ, Munir H, ^Edwards K, ^Pew S, ^Brase J (2013) Identifying DNA sequence variation in key N-metabolism genes in different species of *Chenopodium*, Plant & Animal Genome Conference, San Diego, CA, Jan 10 (poster)

Islamovic E, Obert DE, Oliver RE, Miclaus K, **Jellen EN**, Hang A, Lazo GR, Harrison SA, Ibrahim A, Hu G, Marshall JM, Brown RH, Jackson EW (2013) QTLs affecting barley height, spike length, and spike angle, Plant & Animal Genome Conference, San Diego, CA, Jan 11-16 (poster)

Numerous authors including **Jellen EN** (2013) "Talking genomes" – transcriptome comparison of diploid, tetraploid and newly synthesized hexaploid oat, San Diego, CA, Jan 11-16 (poster)

Numerous authors including **Jellen EN** (2013) Strimagdo: diploid and tetraploid oat transcriptome interactions in a synthetic hexaploid oat, Plant & Animal Genome Conference, San Diego, CA, Jan 11

Funded Grants, Gifts, and Contracts (last 10 years):

Maughan PJ, **Jellen EN**. USDA-ARS, Oregon State University: Barley genome sequencing. BYU subcontract. 2023, \$19,200.

Jarvis DE, Maughan PJ, **Jellen EN**. USDA-NIFA: Improving quinoa productivity through introgression of heat and drought tolerance from wild relatives. Project #2020-67014-30867. 2020-2025, \$500,000.

Jellen EN. General Mills, Inc.: Charter VIII: Genetic Refinement of Moroccan High-Protein Oats for Subsistence Farmers. 2021-2022, \$15,000.

Jellen EN. Ardent Mills: Quinoa Improvement via Quinoa X Pitseed Goosefoot Crosses. 2021-2022, \$18,000.

Jellen EN, Maughan PJ, Jarvis DE. USDA-ARS (Aberdeen, ID) Cooperative Agreement: Comparative Evaluation of Avena Genome Structure. Award #58-2050-0-006. 2020-2022, \$143,330.

Jellen EN, Maughan PJ. USDA-ARS (Cornell, NY) Cooperative Agreement: Avena Clintland 60 Genome Sequence. Award #58-8062-1-005. 2021-2022, \$34,016.

Jellen EN, Maughan PJ, Jarvis DE. USDA-ARS (Fargo, ND) Cooperative Agreement: Small Grains Pangenome Assembly and Annotation. Award #58-3060-0-030. 2020-2025, \$158,961.

Schlueter JA, Brouwer C, **Jellen EN**, Maughan PJ. ABR-PG: Sequencing the hexaploid oat genome using diploid references. NSF-Plant Genome Research Program. 2015-2018. \$1,452,026.

Murphy K, Masias FB, Creech E, Crowder D, Ganjyal G, **Jellen EN**, Maughan PJ, Maul JE, Painter K. Breeding and agronomy of quinoa for organic farming systems. USDA-OREI. 2017-2019. \$1,999,950 (\$122,013 to BYU).

Gomez-Pando LR, Maughan PJ, **Jellen EN**. Identification of lines with genetic resistance to downy mildew in populations generated by the induction of mutation and germplasm collected in Peru for sustainable and organic production of quinoa (*Chenopodium quinoa* Willd.). PNIA National Program for Agricultural Innovation (Peru). 2017-2018. \$20,000.

Jellen EN, Maughan PJ, Dunn M, Steele F, Chaston J, Kenealey J, Pike O. Collaborative research agreement with General Mills, Inc. 2016-2019. Charter 1: \$180,000; Charter VI: \$60,000.

Jellen EN, Maughan PJ. Characterization of cereal hemicellulose and starch biosynthesis genes; development and application of novel genetic approaches to oat (*Avena* spp.) and garden orach (*Atriplex hortensis*). 2014-2016. General Mills, Inc., \$202,104.

Jellen EN, Maughan PJ. Plant exploration in UT, WY, AZ, NM, CO, NE, MN, WI, IL, MO, KS, LA and TX to collect *Chenopodium* germplasm for quinoa improvement. 2014-2015. Project #1245-21000272-10A. \$8,078.

Courses Taught at BYU:

- PWS 188, Introduction to Genetics, Genomics & Biotechnology (majors course)
- PWS 168, Personal Genomics (GE course)
- PWS 420/IAS 397R, Introduction to International Agricultural Development
- PWS 673, Cytogenetics (graduate course)
- PWS 340, Genetics (majors and preprofessional course)
- PDBio 120, Introductory Biology (majors and preprofessional course)

Student Mentoring – Graduate Students Advised (Committee Chair):

- Teal Kalt (M.S., pending)
- Shane Smith (M.S., pending)
- Jason Stettler (Ph.D., 2022)
- Lauren Young (M.S., 2022)
- Melissa Fogarty (Ph.D., 2020)
- Spencer Hunt (M.S., 2019)
- Michael Gines (M.S., 2018)
- Doug Brown (M.S., 2016)
- Felix Jimenez (M.S., 2011)
- Melissa Coon (M.S., 2012)
- Rachel Redman (M.S., 2011)
- Maria Sederberg (M.S., 2008)
- David Jarvis (M.S., 2005)
- Marc Ricks (M.S. Co-chair, 2004)
- Susan Parkinson (M.S., 2003)
- Brian Gardunia (M.S., 2002)
- Matthew Robbins (M.S., 2001)
- Jolene Beard (M.S., 1999)
- Crystal Mitchell (M.S., 1998)

Student Mentoring – Undergraduate Students Since 2018:

- Miranda McLaughlin Otero
- Tyler Moore
- Alyssa Parker
- Jacob O'Brien
- Angel Morris
- Elle Campbell
- Heather Warner
- Amber Adams
- Derek Hunsaker
- Kate Jaggi
- Lauren King
- Ryan Brady
- Lesley Warner
- John Woodhouse
- Lauren Young
- Jed Grow
- Blake Hopkin
- Isaac Clouse
- Savannah Free
- Jake Taylor
- Isaac Esplin
- Maquelle Drummond
- Tyler Kohlert
- Gwen Gustafson
- Calysta Hardy
- Kristin Durrant
- Kyle DeWitt
- Connor Haderlie