

Ksenia V Krasileva

Associate Professor

Department of Plant and Microbial Biology | Innovative Genomics Institute | Center for Computational Biology

University of California, Berkeley

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EDUCATION

2011. PhD in Microbiology, Designated Emphasis in Genomics and Computational Biology University of California, Berkeley, USA

2005. BSc in Plant Biology, Genetics and Microbiology University of California, Berkeley, USA

POSITIONS

2024- Associate Professor, Department of Plant and Microbial Biology, Innovative Genomics Institute, Center for Computational Biology, University of California Berkeley

2018-2024 Assistant Professor, Department of Plant and Microbial Biology, Innovative Genomics Institute, Center for Computational Biology, University of California Berkeley

2014-2018 Group Leader, Earlham Institute and The Sainsbury Laboratory, Norwich, UK

2012 – 2014 USDA AFRI-NIFA Postdoctoral Fellow, Department of Plant Science, University of California, Davis, USA w/Jorge Dubcovsky

2011-2012 HHMI Postdoctoral Scholar, Department of Plant Science, University of California, Davis, USA. w/Jorge Dubcovsky

HONORS

2021 NIH Director's New Innovator Award

2019 Gordon and Betty Moore Inventor Fellow

2018. Carlotta Award (honors outstanding contribution of women to wheat research), promoted by the Italian National Agency for New Technologies, Energy and Sustainable Economic Development and the International Federation of Business and Professional Women-ITALY (FIDAPA BPW Italy).

2007. Outstanding Graduate Student Instructor Award

CAREER HIGHLIGHTS

2022. Meet an IGI Scientist: Ksenia Krasileva

<https://innovativegenomics.org/news/meet-an-igi-scientist-ksenia-krasileva/>

2018. Krasileva, K. From plant immunity to food security: an interview with Ksenia Krasileva. *BMC Biol* 16, 123 (2018). <https://doi.org/10.1186/s12915-018-0597-1>

GRANTS

Current grants

2021-2026 NIH Director's New Innovator Award "*Cross-kingdom health: evolution of innate immune receptors and their targets*" \$1.5 million in direct costs, sole PI

2021-2024 NSF/USDA-NIFA "*Genes and pathways that boost wheat resistance to stripe rust, Puccinia striiformis f.sp. tritici*" \$884,000 total, sole PI.

PUBLICATIONS

43 peer-reviewed and 4 pre-prints publications, 22 corresponding author

Google Scholar Profile: <http://scholar.google.co.uk/citations?user=ATjtt-sAAAAJ&hl=en>

Krasileva lab members **in bold**. *equal first authorship #corresponding

Pre-publication datasets

Seong K, Kumar R, Lunde C, Krasileva K. (2023). Chromosome-level genome assembly of *Triticum turgidum* var 'Kronos' [Dataset]. Zenodo. <https://doi.org/10.5281/zenodo.10215402>

Pre-prints

49. **Stark FG, Torii-Karch M, Yuvaraj S, Bonometti L, Gladieux P, Glass NL, Krasileva K.** Molecular Insights into Fungal Innate Immunity Using the *Neurospora crassa* - *Pseudomonas syringae* Model. *bioRxiv* [Preprint]. 2025 Jan 24:2025.01.22.633611. doi: 10.1101/2025.01.22.633611. PMID: 39896647; PMCID: PMC11785063.

48. **Sutherland, C., Stevens, D. M., Seong, K., Wei, W., & Krasileva, K.** (2024). The Resistance Awakens: Natural diversity informs engineering of plant immune receptors at the DNA, RNA, and protein levels (1.0). Zenodo. <https://doi.org/10.5281/zenodo.14207051>

47. **Xu B, Cerbu A, Lim D, Tralie CJ, Krasileva K** Structure-Aware Annotation of Leucine-rich Repeat Domains *bioRxiv* 2023.10.27.562987; doi: <https://doi.org/10.1101/2023.10.27.562987> *Research article*

46. **Baggs EL, Stark FG, Tiersma MB, Krasileva KV** "*Pseudomonas* isolates from ponds populated with duckweed prevent disease caused by pathogenic *Pseudomonas* species" *bioRxiv* 2022.12.09.519836; doi: <https://doi.org/10.1101/2022.12.09.519836> *Research article*

45. Prigozhin DM, **Sutherland CA**, Rangavajjhala S, **Krasileva KV** "Majority of the highly variable NLRs in maize share genomic location and contain additional target-binding domains" *bioRxiv* 2022.10.05.510735; doi: <https://doi.org/10.1101/2022.10.05.510735> *Research article*

44. **Seong K**#, Lunde C, Seo E, Li M, **Krasileva K**#, Staskawicz B# "A draft genome assembly for the heterozygous wild tomato *Solanum habrochaites* highlights haplotypic structural variations of intracellular immune receptors" *bioRxiv* 2022.01.21.477156; doi: <https://doi.org/10.1101/2022.01.21.477156> #corresponding *Research article*

Journals

2024

43. **Sutherland CA**, Prigozhin DM, Monroe JG, **Krasileva KV**. High allelic diversity in Arabidopsis NLRs is associated with distinct genomic features. *EMBO Rep.* 2024 Mar 25. doi: 10.1038/s44319-024-00122-9. PMID: 38528170 *Research article*

42. **Joubert PM**, **Krasileva KV**. Distinct genomic contexts predict gene presence-absence variation in different pathotypes of *Magnaporthe oryzae*. *Genetics*. 2024 Apr 3;226(4):iyae012. doi: 10.1093/genetics/iyae012. PMID: 38290434; PMCID: PMC10990425 *Research article*

2023

41. **Nakamoto AA**, **Joubert PM**, **Krasileva KV** "Evolutionary dynamics of transposable elements in *Magnaporthe oryzae* reveal evidence of genomic transfer and key differences between rice and wheat blast pathotypes" *Genome Biology and Evolution*, Volume 15, Issue 12, December 2023, evad206, <https://doi.org/10.1093/gbe/evad206> *Research article*

40. **Tamborski J**, **Seong K**, Liu F, Staskawicz B, **Krasileva K**. Altering specificity and auto-activity of plant immune receptors Sr33 and Sr50 via a rational engineering approach. *Mol Plant Microbe Interact.* 2023 Mar 3. doi: 10.1094/MPMI-07-22-0154-R. *Research article*

39. Arora S, Steed A, Goddard R, Gaurav K, O'Hara T, Schoen A, Rawat N, Elkot AF, Chinoy C, Nicholson MH, Asuke S, Steuernagel B, Yu G, Awal R, Forner-Martínez M, Wingen L, **Baggs E**, Clarke J, **Krasileva KV**, Tosa Y, Jones JDG, Tiwari VK, Wulff BBH, Nicholson P "A wheat kinase and immune receptor form the host-specificity barrier against the blast fungus" *Nature Plants* 2023; <https://doi.org/10.1038/s41477-023-01357-5> *Research article*

38. **Seong K**, **Krasileva KV**. Prediction of effector protein structures from fungal phytopathogens enables evolutionary analyses. *Nat Microbiol.* 2023 Jan;8(1):174-187. doi: 10.1038/s41564-022-01287-6.

2022

37. Joubert PM, Krasileva KV. "The extrachromosomal circular DNAs of the rice blast pathogen *Magnaporthe oryzae* contain a wide variety of LTR retrotransposons, genes, and effectors." *BMC Biol* **20**, 260 (2022). <https://doi.org/10.1186/s12915-022-01457-2>

36. Baggs EL, Tiersma MB, Abramson BW, Michael TP, Krasileva KV. Characterization of defense responses against bacterial pathogens in duckweeds lacking EDS1. *New Phytol.* 2022 Dec;236(5):1838-1855. doi: 10.1111/nph.18453. Epub 2022 Sep 25. PMID: 36052715. *Research article*

35. Johannndrees O*, Baggs EL*, Uhlmann C, Locci F, Läßle HL, Melkonian K, Käufer K, Dongus JA, Nakagami H, Krasileva KV#, Parker JE#, Lapin D#. Variation in plant Toll/Interleukin-1 receptor domain protein dependence on ENHANCED DISEASE SUSCEPTIBILITY 1. *Plant Physiol.* 2023 Jan 2;191(1):626-642. doi: 10.1093/plphys/kiac480. PMID: 36227084; *Research article*

*equal first authorship #corresponding

2021

34. Gaurav K, Arora S, Silva P, Sanchez-Martin J, Horsnell R et al (Open Wild Wheat Consortium) "Population genomic analysis of *Aegilops tauschii* identifies targets for bread wheat improvement" *Nat Biotechnol* 2021 (bioRxiv Feb 2021). <https://doi.org/10.1038/s41587-021-01058-4> *Research article*

33. Prigozhin DM and Krasileva KV "Analysis of intraspecies diversity reveals a subset of highly variable plant immune receptors and predicts their binding sites" *The Plant Cell*, Jan 2021. First, pre-printed on *bioRxiv* July 2020 <https://doi.org/10.1093/plcell/koab013> *Research article*

- *Highlight: Judith Van Dingenen, Intraspecies diversity in immune receptors: recurring patterns of evolution point to functional residues, The Plant Cell, Volume 33, Issue 4, April 2021, Pages 788–789, <https://doi.org/10.1093/plcell/koab035>*
- *Editorial highlight: Nancy A Eckardt, James A Birchler, Siobhán M Brady, C Robin Buell, James H Leebens-Mack, Blake C Meyers, Focus on the biology of plant genomes, The Plant Cell, Volume 33, Issue 4, April 2021, Pages 781–782, <https://doi.org/10.1093/plcell/koab039>*
- *Code for identification of hvNLRs is available on GitHub ([link](#)).*
- *Dataset for "Intraspecies diversity reveals a subset of highly variable plant immune receptors and predicts their binding sites" Zenodo DOI [10.5281/zenodo.3951780](https://doi.org/10.5281/zenodo.3951780)*

32. Seong K, Krasileva KV "[Computational structural genomics unravels common folds and predicted functions in the secretome of fungal phytopathogen *Magnaporthe oryzae*](#)" *Mol Plant Microbe Interact.* 2021 Aug 19. (bioRxiv Jan 2021) <https://doi.org/10.1094/MPMI-03-21-0071-R>. *Research article*

- The top **MPMI Graduate Student Paper Award for 2021**
- Dataset for "Computational structural genomics unravels common folds and predicted functions in the secretome of fungal phytopathogen *Magnaporthe oryzae*" Zenodo DOI: [10.5281/zenodo.4456015](https://doi.org/10.5281/zenodo.4456015)

31. 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 RD, Wang N, Kim DW, Zeng Y, O'Connor CH, Li X, Gilbert AM, **Baggs E**, **Krasileva KV**, Portwood JL 2nd, 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 JJ, Hirsch CN, Ware D, Dawe RK. De novo assembly, annotation, and comparative analysis of 26 diverse maize genomes. *Science*. 2021 Aug 6;373(6555):655-662. doi: 10.1126/science.abg5289. PMID: 34353948 First, pre-printed on *bioRxiv* Jan 2021.
30. Michael TP, Ernst E, Hartwick N, Chu P, Bryant D, Gilbert S, Ortleb S, **Baggs EL**, Sree KS, Appenroth KJ, Fuchs J, Jupe F, Sandoval JP, **Krasileva KV**, Borisjuk L, Mockler TC, Ecker JR, Martienssen RA, Lam E. Genome and time-of-day transcriptome of *Wolffia australiana* link morphological minimization with gene loss and less growth control. *Genome Res*. 2020 Dec 23;31(2):225–38. doi: 10.1101/gr.266429.120. Epub ahead of print. PMID: 33361111 First, pre-printed on *bioRxiv* April 2020 *Research article*
29. Walkowiak et al "Multiple wheat genomes reveal global variation in modern breeding" *Nature*, Nov 2020 *Research article*
28. Schwessinger B and **Krasileva KV** "Editorial overview: Biotic interactions — from single molecules to complex ecosystems" *Current Opinion in Plant Biology*, v56 Aug 2020 <https://doi.org/10.1016/j.pbi.2020.06.004> *Editorial*.
27. **Baggs EL**, Monroe JG, Thanki AS, O'Grady R, Schudoma C, Haerty W, **Krasileva KV**. Convergent Loss of an EDS1/PAD4 Signaling Pathway in Several Plant Lineages Reveals Coevolved Components of Plant Immunity and Drought Response. *Plant Cell*. 2020 Jul;32(7):2158-2177. doi: 10.1105/tpc.19.00903. Epub 2020 May 14. PMID: 32409319 First, pre-printed on *bioRxiv* March 2019 *Research article*
 - *Highlight: The Plant Cell in Brief on "Convergent Loss of an EDS1/PAD4 Signaling Pathway in Several Plant Lineages Reveals Co-evolved Components of Plant Immunity and Drought Response."* ([link](#))
 - *First author profile: Erin Louise Baggs* ([link](#))
 - *Highlight: Short summary of "Convergent Loss of an EDS1/PAD4 Signaling Pathway in Several Plant Lineages Reveals Co-evolved Components of Plant Immunity and Drought Response."* In *garnet research round-up* ([link](#))
 - *Code for orthogroups and identification of missing pathways is available on GitHub* ([link](#))
26. Steuernagel B, Witek K, Krattinger SG, Ramirez-Gonzalez RH, Schoonbeek HJ, Yu G, **Baggs E**, Witek AI, Yadav I, **Krasileva KV**, Jones JDG, Uauy C, Keller B, Ridout CJ, Wulff BBH. The NLR-Annotator Tool Enables Annotation of the Intracellular Immune Receptor Repertoire. *Plant Physiol*. 2020 Jun;183(2):468-482. doi: 10.1104/pp.19.01273. Epub 2020 Mar 17. PMID: 32184345 First, pre-printed on *bioRxiv* 2018. *Research article*

25. **Tamborski J** and **Krasileva KV** "Evolution of Plant NLRs: From Natural History to Precise Modifications" *Annu Rev Plant Biol.* 2020 Feb 24.

<https://doi.org/10.1146/annurev-arplant-081519-035901> Review

2019

24. **Krasileva KV** "The role of transposable elements and DNA damage repair mechanisms in gene amplification and protein domain shuffling in plant genomes" *Current Opinion in Plant Biology* 2019. First, pre-printed on PeerJ.

2018

23. **Bailey PC**, **Schudoma C**, Jackson W, **Baggs E**, **Dagdas G**, Haerty W, Moscou M, **Krasileva KV**. Dominant integration locus drives continuous diversification of plant immune receptors with exogenous domain fusions. *Genome Biol.* 2018 Feb 19;19(1):23. doi: 10.1186/s13059-018-1392-6. PMID: 29458393 First, pre-printed on *bioRxiv* 2017 *Research article*

2017

22. **Krasileva KV** "Secrets of a hardy crop: New genomic resources for pearl millet are revealing how crops stand up to challenging environments" *Nature Biotechnology*, 35(10) Oct 2017 *News and Views*

21. **Baggs E**, **Dagdas G**, **Krasileva KV**. NLR diversity, helpers and integrated domains: making sense of the NLR IDentity. *Curr Opin Plant Biol.* 2017 Aug;38:59-67. doi: 10.1016/j.pbi.2017.04.012. Epub 2017 May 8. PMID: 28494248. *Review*

20. Bevan MW, Uauy C, Wulff BBH, Zhou J, **Krasileva KV**, and Clark M "Genomic Innovation for Crop Improvement" *Nature*, Mar 15;543(7645):346-354. *Review*

19. **Krasileva KV**, Vasquez-Gross H, **Bailey P**, Paraiso F, Clissold L, Howell T, Ramirez-Gonzalez R, Wang X, Ayling S, Fosker C, Phillips A, Uauy C, Dubcovsky "Uncovering hidden variation in polyploid wheat." *Proceeding of National Academy of Sciences U S A*, 2017 Feb 7;114(6):E913-E921

- A publicly available resource of >10,000,000 alleles in wheat genes: www.wheat-tilling.com (UK), [WHEAT TILLING](http://wheat-tilling.com) (US).
- The resource has been updated to RefSeq v1.1 and incorporated into Ensembl Plants and Grain Genes.

18. Clavijo BJ, Venturini L, **Schudoma C**, Accinelli GG, Kaithakottil G, Wright J, Borrill P, Kettleborough G, Heavens D, Chapman H, Lipscombe J, Barker T, Lu FH, McKenzie N, **Raats D**, Ramirez-Gonzalez RH, Counce A, Peel N, Percival-Alwyn L, Duncan O, Trösch J, Yu G, Bolser DM, Namaati G, Kerhornou A, Spannagl M, Gundlach H, Haberer G, Davey RP, Fosker C, Palma FD, Phillips AL, Millar AH, Kersey PJ, Uauy C, **Krasileva KV**, Swarbreck D, Bevan MW, Clark MD "An improved assembly and annotation of the allohexaploid wheat genome identifies complete families of agronomic genes and provides genomic evidence for chromosomal translocations." *Genome Res.* 2017 May;27(5):885-896. First, pre-printed on *bioRxiv* 2016.

2016

17. Sarris PF, Cevik V, **Dagdas G**, Jones JD, **Krasileva KV** "Comparative analysis of plant immune receptor architectures uncovers host proteins likely targeted by pathogens" *BMC Biology*, 2016 14(1):8.

- *Highlight:* J Ellis "Integrated decoys and effector traps: how to catch a plant pathogen" ([link](#))
- Code for NLR-ID detection is available on GitHub ([link](#))
- *Interview:* Ksenia V Krasileva, interview with TV - Anglia News, February 2016.

16. Petre B, Saunders DG, Sklenar J, Lorrain C, **Krasileva KV**, Win J, Duplessis S, Kamoun S. "Heterologous Expression Screens in *Nicotiana benthamiana* Identify a Candidate Effector of the Wheat Yellow Rust Pathogen that Associates with Processing Bodies" *PLoS One* 2016 11(2):e0149035. First, pre-printed on *bioRxiv*

2015

15. Schwessinger B, Bart R, **Krasileva KV** and Coaker G. "Focus issue on plant immunity: from model systems to crop species." *Front Plant Sci.* 2015 6:195.

14. Wu CH, **Krasileva KV**, Banfield MJ, Terauchi R, Kamoun S. "The "sensor domains" of plant NLR proteins: more than decoys?" *Front Plant Sci.* 2015 6:134.

2014

13. Henry IM, Nagalakshmi U, Lieberman MC, Ngo KJ, **Krasileva KV**, Vasquez-Gross H, Alina Akunova A, Akhunov E, Dubcovsky J, Tai TH and Comai L "Efficient genome-wide detection and cataloguing of EMS-induced mutations using exome capture and next-generation sequencing." *Plant Cell*, 2014 26(4):1382-1397.

2013

12. **Krasileva KV**, Buffalo V, Bailey P, Pearce S, Ayling S, Tabbita F, Soria M, Wang S, Consortium I, Akhunov E, Uauy C, Dubcovsky J "Separating homeologs by phasing in the tetraploid wheat transcriptome," *Genome Biol.* 2013 14(6):R66.

2012

11. Steinbrenner AD, Goritschnig S, **Krasileva KV**, Schreiber KJ, Staskawicz BJ. "Effector recognition and activation of the *Arabidopsis thaliana* NLR innate immune receptors." *Cold Spring Harb Symp Quant Biol.* 2012 77:249-57.

10. Bart R, Cohn M, Kassen A, McCallum EJ, Shybut M, Petriello A, **Krasileva K**, Dahlbeck D, et al. "High-throughput genomic sequencing of cassava bacterial blight strains identifies conserved effectors to target for durable resistance." *PNAS*, 2012 109(28):E1972-9.

9. Goritschnig S, **Krasileva KV**, Dahlbeck D, Staskawicz BJ. "Computational prediction and molecular characterization of an oomycete effector and the cognate *Arabidopsis* resistance gene" *PLoS Genetics*, 2012 8(2):e1002502.

8. Win J, **Krasileva KV**, Kamoun S, Shirasu K, Staskawicz BJ, Banfield MJ. "Sequence divergent RXLR effectors share a structural fold conserved across plant pathogenic oomycete species" *PLoS Pathogens*, 2012 8(1): e1002400.

2011

7. **Krasileva KV**, Zheng C, Leonelli L, Goritschnig S, Dahlbeck D, Staskawicz BJ. "Global analysis of Arabidopsis / downy mildew interactions reveals prevalence of incomplete resistance and rapid evolution of pathogen recognition." *PLoS One*, 2011 6: e28765.

6. Zhao B, Dahlbeck D, **Krasileva KV**, Fong RW, Staskawicz BJ. "Computational and Biochemical Analysis of the Xanthomonas Effector AvrBs2 and Its Role in the Modulation of Xanthomonas Type Three Effector Delivery." *PLoS Pathogens*, 2011 12 :e1002408.

5. Chou S*, **Krasileva KV***, Holton J, Steinbrenner A, Alber T, Staskawicz BJ. (2011) "Hyaloperonospora arabidopsidis ATR1 effector is a repeat protein with distributed recognition surfaces." *PNAS*, 2011 108(32): 13323-8. *equal first author contribution

4. Potnis N*, **Krasileva K***, Chow V, Almeida NF Jr, Patil PB, et al. "Comparative Genomics Reveals Diversity among Xanthomonads Infecting Tomato and Pepper." *BMC Genomics*, 2011 12(1): 146.*equal first author contribution

2010

3. **Krasileva KV**, Dahlbeck D, Staskawicz BJ. "Activation of an Arabidopsis Resistance Protein Is Specified by the in Planta Association of Its Leucine-Rich Repeat Domain with Cognate Oomycete Effector." *Plant Cell*, 2010 22:1-16.

2. Dulla GF, **Krasileva KV**, Lindow SE. "Interference of Quorum Sensing in Pseudomonas syringae by Bacterial Epiphytes that Limit Iron Availability." *Environmental Microbiology*, 2010, 12(6): 1762-74.

2007

1. Win J, Morgan W, Bos J, **Krasileva KV**, Cano LM, Chaparro-Garcia A, Ammar L, Staskawicz BJ, Kamoun S. "Adaptive Evolution Has Targeted the C-terminal Domain of the RXLR Effectors of Plant Pathogenic Oomycetes." *Plant Cell*, 2007 19: 2349-69

PATENTS

2. **Krasileva KV**, Prigozhin DM, Staskawicz B, Lui F METHODS AND COMPOSITIONS FOR MODIFYING PLANT IMMUNITY. Patent publication number: WO/2021/113569, Publication date: 10.06.2021. International Application No. PCT/US2020/063203. International Filing Date: 04.12.2020

1. December 2016 Schudoma C, Clark M and **Krasileva KV** British Patent Application No. 1620789.6
Gluten-seq Earlham Institute

PRESENTATIONS:

Conference talks (past 5 years)

2023 Plant and Animal Genomics Conference, San Diego, USA, *invited talk*
2023 NLR symposium, Tübingen, Germany, *invited talk*
2023 Canadian Institute for Advanced Research (CIFAR) Fungal Biology, Toronto, Canada, *invited talk*
2023 Rising Stars in Plant Biology (virtual), *award finalist talk*
2023 International Congress of Molecular Plant Microbe Interactions, Rhode Island, USA, *plenary talk*
2023 International Congress of Plant Pathology, Lyon, France, *invited talk*
2022. BC Regional Annual Meeting of the Canadian Phytopathological Society (virtual) *keynote talk*
2022. International Brachypodium Meeting (virtual) *keynote talk*
2022. The Maize Genetics Conference, USA *talk*
2021. ICAR (virtual). *Invited speaker*
2020. American Society for Plant Biology Plantae Global (virtual). *Invited speaker*
2020. Biology of Genomes (virtual), Cold Spring Harbor Laboratory, USA. *Selected speaker*
2020. Plant and Animal Genomes, San Diego, USA. *Invited speaker*
2019. Plant Genomics, System Biology and Engineering, Cold Spring Harbor Laboratory, USA. *Invited speaker*
2019. Plant Genome Evolution 2020, Sitges, Spain. *Selected speaker*
2018. International Plant Molecular Biology, Montpellier, France. *Invited speaker. Session chair.*
2018. Women and Wheat, Rome, Italy. *Invited speaker and winner of the Carlotta Award*

2017. Genome Science & Genome 10K, Norwich, UK. *Invited speaker*

Invited seminars (past 5 years)

2023 University of Zurich, Switzerland
2023 Kyoto University, Japan
2023 Science Innovation
2023 North Carolina Biohub
2022. Oklahoma State University, USA
2022. Danforth Center for Plant Sciences, USA
2022. UC Davis, USA
2022. Imperial College London, UK
2022. Oxford University, UK
2022. The Sainsbury Laboratory, UK
2022. Toronto University, Canada
2022. University of Göttingen, Germany
2022. UC Riverside, USA
2021. *Plantae Presents*
2021. North Carolina State University, USA
2021. University of Illinois Urbana-Champaign, USA
2021. University of Nebraska-Lincoln, USA
2021. Clubhouse <https://www.clubhouse.com>

2020. University of Massachusetts at Amherst, USA
2020. Bayer Crop Science, USA
2020. Innovative Genomics Institute, USA
2020. Carnegie Institution for Science, USA
2019. University of California, Davis, USA
2019. Cornell University, USA
2019. AgriTech Geneva, NY, USA
2018. UC Davis, USA
2018. UC Riverside, USA
2018. USDA Plant Gene Expression Centre, USA
2017. Saint Petersburg State University, Russia

MENTORSHIP & RESEARCH TRAINEES in The Krasileva Lab (2015-2022)

Leadership training:

2019 – Leadership and Management training for ‘Women in Wheat’ sponsored by Bill and Melinda Gates foundation (nominated by the Borlaug Global Rust Initiative), Chennai, India.
2016 - Leadership and Management training for young investigators (nominated by Earlham Institute), Norwich UK.

Staff (4): China Lunde Shaw (2020- current, SRA); Andrew Deatker (2016-2019 Assistant Specialist); Christian Schudoma (2016-2017 bioinformatician); Francesca Stefanato (2015-2016 RA).

Post-docs (9): Rakesh Kumar (2022-current), Wei Wei (2022-current), Erin Baggs (2021-2022); Lorena Parra (2020-2023, now postdoc at UC Davis); Janina Tamborski (2019-2022, now postdoc at Stanford); Elisha Thynne (2017-2018, now postdoc at Max Plank). Dina Raats (2015-2018), Paul Bailey (2015-2017, now bioinformatician at the Kew Garden); Gulay Dagdas (2015-2017).

PhD students (6) *DE=Designated Emphasis in Genomics and Computational Biology

Erin Baggs (2016 - 2021, *Plant Biology*); Pierre Joubert (2019 - 2023, *Microbiology* DE); Frances Grace Stark (2020 - current, *Microbiology*); Boyan Xu (2020 - current, *Mathematics* DE); Kyungyong Seong (2021 - current, *Microbiology* DE); Chandler Sutherland (2021- current, *Plant Biology* DE).

Rotation students (16): Marlo Hall (2022, *Plant Biology*), Antonio Chapparo (2022, *Plant Biology*), Ryan Kennealy (2021, *Plant Biology*); Chandler Sutherland (2021, *Plant Biology*); Dean Pettinga (2021, *Plant Biology*); Kyungyong Seong (2020, *Microbiology*); Frances Grace Stark (2020, *Microbiology*); Yiling Fang (2020, *Plant Biology*); Nathan Diplock (2020, *Plant Biology*), Hang Xue (2019, *Plant Biology*), Bradie Lee (2019, *Plant Biology*), Lauren Hamm (2019, *Plant Biology*); Lorenzo Washington (2019); Pierre Joubert (2019, *Microbiology*); Joanna Feehan (2016, *Norwich Research Park Plant Biology*).

Predoctoral (postbac) students (3): Anne Nakamoto (2022-current) Reshi Shanmuganathan (2018, now PhD student at GMI Vienna); Ruby O’Grady (2018, now Science communication officer at JIC); Amelie Heckmann (2016-2017, now PhD student at University College Dublin).

Masters students (1): Marcus Watkins (2016-2017)

Undergraduate students (13): Ashley Bendl (2022-current, URAP), Daven Lim (2022-current, URAP), Duke Yuvaraj (2022-current, URAP), Mari Torii-Karch (2022-current, URAP); Sarah Song (2021-2022, URAP); Marcus Varni (2022, URAP); William Cumbelich (2022, URAP); Engie Mostafa (2021, URAP); Anne Nakamoto (2020-2022, URAP, SURF L&S); Daniel ChoAnn (2020-2021, URAP); Mark Tiersma (2019-2021, URAP); Aman Sidhant (2018), Celine Bellegarda (2018, CNR SPUR).
URAP=Undergraduate Research Apprentice Program, SURF=Summer Undergraduate Research Fellowship.

High School students (2): Olivia Sagayaradj (2022), Cole Davies (2022)

Awards and fellowships received by lab members

- Chandler Sutherland - Grace Kase Fellowship (2021-2022)
- Kyungyong Seong - Berkeley Fellowship (2020-2021), Bakar Fellowship (2024-2025), best graduate student MPMI 2021 paper award.
- Frances Stark - Chancellor Fellowship (2019-current), the Charmoon Richardson Memorial Scholarship from the Sonoma County Mycological Association (2021)
- Boyan Xu - Department of Energy Computational Science Graduate Fellowship (DOE CSGF; 2020-current)
- Erin Baggs - Doctoral Training Partnership Fellowship (2016-2018)
- Pierre Joubert - Grace Kase Fellowship (2019-2020)

TEACHING AND OUTREACH

Training and awards

Teaching Excellence Colloquium (2018-2019) UC Berkeley
Outstanding Graduate Student Instructor Award (2007)

Classes taught (past 5 years)

2020-current Professor PMB200B/220B, Graduate module in Genomics and Computational Biology, UC Berkeley
2019-current Professor PMB150 “Plant Cell”, UC Berkeley.
2020 Professor PMB290, Literature review in Genomics of Plant-Microbe Interactions
2018 Guest lecturer PMB20 “Agriculture and Society”, UC Berkeley.
2017. Lecturer “Summer school in plant-microbe interactions”, The Sainsbury Laboratory, UK
2016. Lecturer “Wheat as a model organism”, workshop for students, postdocs and breeders, Earlham Institute, UK
2015 Keynote Speaker The Sainsbury Laboratory Summer School.

Outreach

2022. Advisory board for development of new curricula in Genomics and Computational Biology for High School students with Biotech Partners (<http://www.biotechpartners.org>)

2021. 2021, 2022. Genomics and Plant Health workshop. <https://krasilevalab.org/outreach/>
Undergraduate research students (2x). High school students (2x). *Together with graduate students and postdocs, we developed new teaching and learning material on 5 topics “Decoding Genomes”, “Genome assembly”, “Protein structures”, “Genome Editing” and “Plant Microbiomes” plus hands on exercises and coding examples to demystify genomics, spur interest in data science and engage students from very diverse backgrounds therefore contributing to removing barriers for historically underrepresented groups in data sciences.*

2021. Parenting in Science panel discussion for graduate students and postdocs, UC Berkeley, CA (virtual)

2021. Postdoc to Faculty panel discussion, UC Davis CA (virtual)

2018-2020. SkypeAScientist. *Ad hoc (online)*

2017. “Summer school in plant-microbe interactions”, The Sainsbury Laboratory, UK

2016. “Working with Wheat in the 21st century” Wheat as a model organism workshop for students, postdocs and breeders. Norwich, UK. *Session leader*

2016 “Summer school in plant-microbe interactions”, The Sainsbury Laboratory, UK - *Keynote Speaker*

2016. Krasileva K., Stitt T., Swan D., Bickerton P. Scientists on the Loose at The Cut Science Café, Halesworth

2016. Ksenia V Krasileva, interview with TV - Anglia News, February 2016.

2015. Wheat Genomics Breeders Workshop, The Genome Analysis Centre, Norwich UK. *Session leader*

SERVICE AND PROFESSIONAL ACTIVITY

Service at UC Berkeley

Center for Computational Biology curriculum committee member (x1)

Center for Computational Biology DEIB committee member (x1)

Plant Biology Graduate Admissions Committee Chair (x1), member (x1)

Graduate Group in Microbiology Graduate Admissions Committee member (x2)

Faculty search “PMB Plant Biochemistry Assistant Professor” committee member (x1)

Plant Biology external seminars committee member (x4)

Department of Plant and Microbial Biology 30th anniversary committee member (x2), alumni connection (x1)

Plant facilities committee member (x1)

Graduate students Welcome Address from faculty (x1)

Ad hoc ECEP faculty parents committee and fundraising (x1)

Membership and Engagement in Professional Societies

American Phytopathological Society (2021 – current).

- UC-Berkeley PMB representative on the Academic Unit Leaders Forum.

American Society of Plant Biology (2018 – current)

International Society – Molecular Plant Microbe Interactions (2016 – current)

- Session moderator at the IS-MPMI international congress.

SUSTAIN COST Action “Pathogen-informed strategies for sustainable broad-spectrum crop resistance” (2016-2018)

Research Network “Norwich Rust Group” (2014 – 2018)

Conferences

Chair and organizer of session “Genome Editing and Crop Genomics”, International Plant Molecular Biology Conference, August 2018, Montpellier, France

Editorial and peer-review

- Section editor at *Current Opinion in Plant Biology*, ‘Biotic Interactions’, 2020
- Guest editor in *PLoS Genetics*, *Annual Reviews in Plant Biology*
- Peer-review of >70 publications in such journals as *Science*, *Nature*, *Nature Biotechnology*, *Nature Genetics*, *Nature Plants*, *PLoS Biology*, *PLoS Genetics*, *PNAS*, *Genome Biology*, *New Phytologist*, *FEBS Letters* and others.
- Peer-reviewer and grant panel member for national and international funding agencies, such as BBSRC, ERC, ANR, NSF, USDA-NIFA.
- President of the review committee - the 5 year review of a research unit (France).