



# VitisGen III

Quarterly Newsletter, January 2025

## Message from the Director

**Happy New Year from the *VitisGen3* leadership team! I hope that all of you are enjoying a restful break with friends or family. I'm looking forward to seeing many of you at our upcoming Annual Meeting in San Diego. Last year's Annual Meeting feedback informed our theme for this year: "*Collaborations and Cooperation at home & abroad*". We will hear from project members and graduate students across the breadth of our own current, upcoming, and proposed projects, as well as welcome our keynote guests, Drs. Komlan Avia (GrapeBreed4IPM) and Giorgio Gambino (Shield4Grape). In addition to project updates, introductions, and discussions, we're excited to reflect on what we've accomplished and look forward to future opportunities for the entire grape research community.**

~Matt Clark



Photos by Davy DeKrey

## Meeting Information

### Annual Meeting:

This year's meeting will feature keynote talks from the two Project Directors of the new EU Horizon grant programs: [Dr. Komlan Avia](#) of [GrapeBreed4IPM](#) and [Dr. Giorgio Gambino](#) of [Shield4Grape!](#)

**Dates:** Thursday, January 9 (all day) and Friday, January 10 (until 1pm)

**Location:** Doubletree Hilton Hotel Circle in San Diego CA

[Link to the pre-read packet](#), including the agenda, restaurant and reimbursement information, speaker bios, and attendee lists.

**Multi-State Trial Workshop Save the Date:** Wednesday, March 5, 2025 in conjunction with BEV NY 2025 in Canandaigua, NY.

Our End of Year meeting took place on Friday, September 6th. [Click here to view the recording of the meeting.](#)

Questions about upcoming meetings? Email Kate at [fessl023@umn.edu](mailto:fessl023@umn.edu)

## VitisGen3 Genotyping Workshop

**We are announcing an exciting opportunity for new breeders, industry partners, and rhAmpSeq users!**

Get experience with:

- rhAmpSeq and phenotyping data
- QTL mapping
- Fine mapping and marker assisted selection

Through a combination of lectures and hands-on projects!

The VitisGen3 genotyping team's new **VitisGen3 Genetics Workshop** will be available **online from October 14<sup>th</sup>**.

### **To Register:**

- A Cornell BioHPC account is required! Please request a new account via the following link: [New User Request](#)
- In the New User Request comment field, write "Register for the Vitisgen3 workshop. I am from [insert your PI's name]'s group"
- Once your BioHPC account is approved, you can register for the workshop via the following link: [VitisGen3 Genetics Workshop Registration](#)

### **Once Registered:**

- Lecture videos and hands-on instructions will be released to registrants by October 14th.
- Three office hours will be available in October and November to help registrants complete the hands-on projects. These dates will be published later in October.

**A big thank you to Drs. Qi Sun, Cheng Zou, and Dustin Wilkerson for all of their hard work creating this community resource!**

**Student Spotlight: Aliyah Brewer**



Role: PhD student at Cornell University

Advisors: Drs. Maddy Oravec and Lance Cadle-Davidson

My research goal is to advance the technologies and resources available in breeding for durable downy mildew resistance. My projects balance *Rpv* discovery, collection, and effect comparisons using computational and field-based approaches, all while utilizing microscopic and hyperspectral imaging technologies to answer both applied and theoretical research questions regarding resistance.

I love the active learning that comes along with being a grad student. The projects I'm working on require a diverse set of skills and knowledge, and I genuinely feel like I'm developing a holistic view about what resistance breeding is. With the variety and diversity of tasks at hand, I enjoy being able to choose (with the guidance of my advisors) my own adventure each day!

Click on any of the images below to visit the post!



## Upcoming Conferences

Click on underlined text for more information about each event

VitisGen3 Annual Meeting, January 9-10, 2025 in San Diego, CA

VitisGen3 Multi-State Field Trial Workshop, March 4-6, 2025 in Canandaigua, NY

**Unified Wine & Grape Symposium, January 28-30, 2025 in  
Sacramento, CA**

**ASEV National Conference, June 16-19, 2025 in Monterey, CA**

**GiESCO 2025, July 27-31, 2025 at Geisenheim University,  
Germany**

## Recent papers from VG3 PIs and Collaborators

Barnes, M. R., Friell, J., Runck, B. C., Soldat, D. J., Watkins, E., & Yue, C. (2025). Cultivating connections: Framing turfgrass as a thriving social–ecological–technological system. *Crop Science*, 65(1), e21387. <https://doi.org/10.1002/csc2.21387>

Baysal, C., Kausch, A. P., Cody, J. P., Altpeter, F., & Voytas, D. F. (2024). Rapid and efficient *in planta* genome editing in sorghum using foxtail mosaic virus-mediated sgRNA delivery. *The Plant Journal*, tpj.17196. <https://doi.org/10.1111/tpj.17196>

Bhattarai, K., Ogden, A. B., Pandey, S., Sandoya, G., Shi, A., Nankar, A. N., Jayakodi, M., Huo, A. (Heqiang), Jiang, T., Tripodi, P., & Dardick, C. (2024). Improvement of Crop Production in Controlled Environment Agriculture through Breeding. *Frontiers in Plant Science*, 15, 1524601. <https://doi.org/10.3389/fpls.2024.1524601>

Brock, R. M., Johns, C., Lust-Moore, K., & Worthington, M. (n.d.). *Evaluating Efficiency and Accuracy of Three Texture Analysis Methods for Blackberry Fruit.*

Daler, S., Kaya, O., Canturk, S., Korkmaz, N., Kılıç, T., Karadağ, A., & Hatterman-Valenti, H. (2024). Silicon Nanoparticles (SiO<sub>2</sub> NPs) Boost Drought Tolerance in Grapevines by Enhancing Some Morphological, Physiological, and Biochemical Traits. *Plant Molecular Biology Reporter*, 1–19. <https://doi.org/10.1007/s11105-024-01520-y>

Daler, S., Kaya, O., Korkmaz, N., Kılıç, T., Karadağ, A., & Hatterman-Valenti, H. (2024). Titanium Nanoparticles (TiO<sub>2</sub>-NPs) as Catalysts for Enhancing Drought Tolerance in Grapevine Saplings. *Horticulturae*, 10(10), Article 10. <https://doi.org/10.3390/horticulturae10101103>

- Gallardo, K.,** Gutiérrez-Li, A., Luckstead, J., Nayga, R. M., Sallato, B., & Yang, W. (2024). H-2A workers' preferences for job attributes: Evidence from an experiment. *Journal of the Agricultural and Applied Economics Association*, 3(4), 633–654. <https://doi.org/10.1002/jaa2.137>
- Karakus, S., **Hatterman-Valentí, H.,** Sahin, M., & Kaya, O. (2024). Comprehensive Analysis of Volatile Organic Compounds and Their Impact on Apple Quality Following Some Essential Oil Treatments Against *Botrytis cinerea*. *Horticulturae*, 10(12), Article 12. <https://doi.org/10.3390/horticulturae10121359>
- Kaya, O., Ates, F., Daler, S., Canturk, S., Turan, M., & **Hatterman-Valentí, H.** (2024). Optimizing Grape Quality Through Tillage and Organic Fertilization: A Comprehensive Analysis of Phenolic and Anthocyanin Variability Over Three Years. *Food Science & Nutrition*, 12(11), 9428–9442. <https://doi.org/10.1002/fsn3.4500>
- Kaya, O., Karakus, S., Bozkurt, A., Canturk, S., Yilmaz, T., & **Hatterman-Valentí, H.** (2025). Essential oil compounds and their impact on grape (*Vitis vinifera* L. cv. Narince) physiology under *Botrytis cinerea* infection. *Physiological and Molecular Plant Pathology*, 136, 102544. <https://doi.org/10.1016/j.pmpp.2024.102544>
- Loarca, J., Wiesner-Hanks, T., Lopez-Moreno, H., Maule, A. F., Liou, M., Torres-Meraz, M. A., **Díaz-García, L.,** Johnson-Cicalese, J., Neyhart, J., Polashock, J., Sideli, G. M., Strock, C. F., Beil, C. T., **Sheehan, M. J.,** Iorizzo, M., Atucha, A., & Zalapa, J. (2024). BerryPortraits: Phenotyping Of Ripening Traits cranberry (*Vaccinium macrocarpon* Ait.) with YOLOv8. *Plant Methods*, 20, 172. <https://doi.org/10.1186/s13007-024-01285-1>
- Medrano, J. F., **Cantu, D.,** Minio, A., Dreischer, C., Gibbons, T., Chin, J., Chen, S., Van Deynze, A., & Hulse-Kemp, A. M. (n.d.). De novo whole-genome assembly and annotation of *Coffea arabica* var. Geisha, a high-quality coffee variety from the primary origin of coffee. *G3 Genes/Genomes/Genetics*. <https://doi.org/10.1093/g3journal/jkae262>
- Palneau, M.,** Zaccheo, M., **Massonnet, M., & Cantu, D.** (2024). Advances in grape and pathogen genomics toward durable grapevine disease resistance. *Journal of Experimental Botany*, erae450. <https://doi.org/10.1093/jxb/erae450>
- Rari Das, P., Islam, M. T., Liu, Y., Liu, Z., **Dardick, C.,** & Sherif M., S. (2024). Temporal changes in the proanthocyanidins to anthocyanins ratio during dormancy associate with bloom time variations in

Tagoe, A., Silva, A., Koparan, C., Poncet, A., Wang, D., Johnson, D., & **Worthington, M.** (2024).

Blackberry Growth Monitoring and Feature Quantification with Unmanned Aerial Vehicle (UAV)

Remote Sensing. *AgriEngineering*, 6(4), Article 4. <https://doi.org/10.3390/agriengineering6040260>

**New to VG3? Click here to submit a profile for the website**

Note: Due to privacy policies at the University of Minnesota, we are no longer able to publish student profiles on our website. Thank you for your understanding about this policy change!

## Call for website contributions!

Do you have a research update to share? Some cool photos to show

off? A student looking to add a byline to their CV? Email Kate

Fessler at [VitisGen3@umn.edu](mailto:VitisGen3@umn.edu) or [fessl023@umn.edu](mailto:fessl023@umn.edu)



[VitisGen Twitter](#)



[VitisGen3 Website](#)



[Email](#)



[VitisGen3 Instagram](#)

*Copyright © 2023 VitisGen3, All rights reserved.*

**Our email address is:**

[vitisgen3@umn.edu](mailto:vitisgen3@umn.edu)

[vitisgen3@umn.edu](mailto:vitisgen3@umn.edu)