Hyma, K., Q. Sun, S. Mitchell, C. Acharya, J. Londo, P. Cousins, A. Fennell, C.-F. Hwang, J. Lu, J. Luby, D. Ramming, B. Reisch, and L.E. Cadle-Davidson. 2013.  *VitisGen: Accelerating grape cultivar improvement*.  International Plant and Animal Genome XXI.  San Diego, CA, January 12-16, 2013.

VitisGen is a multiple institute collaborative project funded by the USDA-NIFA SCRI program, with a long term goal to accelerate grape cultivar improvement by using cutting-edge molecular marker technologies, centralized facilities to rigorously characterize traits, and molecular breeding expertise. The genotyping team of the VitisGen project adopted genotyping-by-sequencing (GBS), which is a high-throughput and low-cost genotyping platform originally developed for highly inbred maize and sorghum populations. We will present an overview of the technology, current progress in adapting GBS for marker discovery and map construction in outcrossing grape populations, and strategies to transition from marker discovery to marker application using GBS. We will also discuss the development of quality assurance and quality control procedures for large scale cross-disciplinary research collaborations.