DAVIS COLLEGE
RESEARCH STAFF AWARD

Nominee:	Ai Kitazumi					
Job Title:	Research Associate – Genomics			Department:	PSS	
Mail Stop:	2122	Phone:	806-834-3775	Fax: psstechsupport@ttu.edu	Supervisor	Benildo Reyes
Nominator:	Glen Ritchie					
Job Title:	Department Chair			Department:	PSS	
Mail Stop:	2122	Phone:	806-834-4325	Fax: glen.ritchie@ttu.edu		

Instructions: Please list examples for each item. Maximum number of pages for nomination is two (2). Nominations should be concise and explain how the performance of this employee is exemplary for his/her position.

CASNR/TTU Excellence:

Item A: How does nominee consistently demonstrate a customer-oriented, flexible and responsive focus when accomplishing his/her work? *List in detail examples of specific behaviors and activities that demonstrate how these criteria are met and to what degree. What does this person do that is extraordinary?*

Ai Kitazumi is the consummate scientist and teammate. She has unique expertise in computational genomics, and scientists from across Texas Tech University with interest in this field reach out to her for help with their analyses.

She specializes in analyzing genetic inheritance and gene expression patterns, including the response of repetitive regions and transposons. She currently focuses on gene silencing profiling through methylation and transcriptomic studies and leads metagenomic investigations of bacterial and phage-viral genomes, to enhance food safety and track organisms with fast mutation rates for government projects. Here are some of her recent publications:

- Zhang Y, **Kitazumi A**, Liao YT, de Los Reyes BG, Wu VCH. Metagenomic investigation reveals bacteriophage-mediated horizontal transfer of antibiotic resistance genes in microbial communities of an organic agricultural ecosystem (2023). *Microbiol Spectr*. 2023;11(5):e0022623.
- **Kitazumi A**, Pabuayon ICM, Cushman KR, Yano K, de los Reyes BG (2022) Plant Transcriptomics: Data-driven Global Approach to Understand Cellular Processes and Their Regulation in Model and Non-Model Plants. In *Plant Omics: Advances in Big Data Biology*, 10-29.
- Asari M, **Kitazumi A**, Nambara E, de los Reyes BG, Yano K (2022) Plant Gene Expression Network In *Plant Omics: Advances in Big Data Biology*, 137-150
- Sanchez J, Kaur PP, Pabuayon ICM, Karampudi NBR, **Kitazumi A,** Sandhu N, Catalos M, Kumar A, De los Reyes BG (2022) *DECUSSATE* network with flowering genes explains the variable effects of qDTY12.1 to rice yield under drought across genetic backgrounds. *Plant Genome* 15(1):e20168.
- Sanchez J, Kaur PP, Pabuayon ICM, Karampudi NBR, **Kitazumi A,** Sandhu N, Catalos M, Kumar A, De los Reyes BG (2021). Yield maintenance under drought is orchestrated by the qDTY12.1-encoded *DECUSSATE* gene of rice through a network with other flowering-associated genes across the genetic background. *BioRxiv*, 2021 (Preprint).
- Shu X, Singh M, Karampudi NBR, Bridges DF, **Kitazumi A,** Wu VCH, De los Reyes BG (2021). Responses of *Escherichia coli* and *Listeria monocytogenes* to ozone treatment on non-host tomato: Efficacy of intervention and evidence of induced acclimation. *PLoS ONE*. 2021;16(10):e0256324.
- Pabuayon ICM, **Kitazumi A,** Cushman KR, et al (2021). Novel and transgressive salinity tolerance in recombinant inbred lines of rice created by physiological coupling-uncoupling and network rewiring effects. *Front Plant Sci*. 2021;12:615277.

Item B: Going the Extra Mile. Has this employee made a significant contribution to quality within the department, college, and university and/or has this employee gone above and beyond the call of duty in responding to the needs of the customer, internal or external? *List specific examples that describe how the employee meets these criteria and the impact actions have had on the customer.*

Ai has devoted hundreds of hours to overseeing and guiding research and is the go-to person for computational biology in our college. This work requires strong communication skills, patience, and a pleasant personality.

Ai is highly professional and is committed to the success of her lab and the other labs she works with. Her teammates describe her as kind and generous of her time.