

# National Association of Animal Breeders



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## **NAAB ANNOUNCES RECIPIENT OF 2025 RESEARCH AWARD DR. GEORGE E. LIU**

*Madison, WI* [October 6, 2025] – The National Association of Animal Breeders is proud to recognize Dr. George E. Liu, Research Biologist at the Animal Genomics and Improvement Laboratory, for his outstanding contributions to the field of bioinformatics and animal genomics as the NAAB 2025 Research Recipient. With more than 34 years of experience, Dr. Liu has advanced the science of genome assembly, annotation, and functional analysis, directly impacting the health and productivity of dairy cattle and small ruminants.

In 2018, Dr. Liu co-founded the Farm Animal Genotype-Tissue Expression (FarmGTEx) Consortium, a pioneering initiative that established a functional annotation framework for livestock genomics. This international effort has significantly advanced understanding of tissue-specific gene regulation and gene-trait interactions in cattle, pigs, and other livestock species. By enabling more precise genetic selection for economically important traits, FarmGTEx has laid a solid foundation for transformative impacts on artificial insemination (AI) and genetic improvement programs in both the dairy and beef industries—particularly in sire selection and reproductive efficiency, which are key drivers of genetic progress.

Dr. Liu has also led and co-led multiple USDA and international collaborations aimed at advancing genomic selection and precision breeding strategies. His groundbreaking research—particularly in incorporating structural and functional variations into genomic prediction models—has been instrumental in improving trait prediction accuracy, a first in livestock genomics. By integrating novel genomics results such as copy number variation (CNV) with traditional breeding approaches, his research has refined genomic selection models, leading to more accurate predictions of fertility-related traits. His ongoing efforts in functional annotation, genome assembly, and genetic evaluation are shaping the future of AI and genomic selection in cattle breeding, ensuring sustainable advancements in livestock genetics and driving innovation in dairy and beef programs worldwide.

Since 2020, Dr. Liu has authored 83 peer-reviewed articles—36 as senior or first author—along with four book chapters, six datasets, and 34 abstracts. His research leadership extends beyond publications: he serves on the editorial boards of six scientific journals and has delivered more than 80 invited presentations across the globe.

Dr. Liu's work has been supported by more than \$3 million in external competitive grant funding. His published datasets—including 140 whole genome sequences, 2,700 copy number variation regions, and 32,000 differentially methylated regions—are now widely utilized by scientists internationally, advancing collaborative discoveries and innovation in animal genomics.

Dr. Liu's contributions have had a transformative impact on animal genomics research. His commitment to advancing knowledge and building resources has strengthened the global scientific community and created lasting benefits for livestock improvement. Through his groundbreaking research, leadership in FarmGTEx, and dedication to collaboration, Dr. Liu continues to play a vital role in shaping the future of animal agriculture.



2025 NAAB Research Award recipient Dr. George E. Liu receiving his award from NAAB Board Vice Chair, Jerry Thompson at the NAAB 79<sup>th</sup> Annual Meeting in Milwaukee, Wisconsin on August 26, 2025.

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NAAB is the national trade association for artificial insemination businesses. NAAB members account for about 95% of dairy semen sold in the USA and market semen to more than 100 countries around the world.

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