



Agricultural Genome to
Phenome Initiative

NEWSLETTER

~ Winter 2021 ~

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AG2PI AT PAG CONFERENCE

The AG2PI team will be participating at the upcoming Plant and Animal Genome (PAG) Conference, Jan. 8-12, in San Diego, California. We invite you to participate in an AG2PI-sponsored workshop, “Harnessing the Ag Genomics Data torrent” which promises to bring together animal and plant communities to help focus priorities for improving data re-use and integration for linking G2P. We also invite you to participate in our PAG Scavenger Hunt to win fabulous prizes! Look for details at the conference and on the AG2PI website.

SEED GRANTS – THE LATEST INFO

Second Round of Seed Grants Awarded

AG2PI has named the recipients of Round 2 seed grant awards. The 11 projects involve 20 institutions and agencies across the country. Grants awarded in this second round span three levels of funding: emerging grants, enabling grants, and establishing grants. Awarded projects may be multi-institutional, offer a cross-disciplinary application and must address at least one of the focus areas requested by the USDA. Award amounts range from \$20,000–\$75,000, depending on the grant type and associated funding level, and projects will run from six to 15 months.

Round 2 Seed Grant recipients listed by lead Project Investigator:

Emerging Grants:

- Irene Cobo, University of Connecticut: *Community Engagement to Improve Standards and Integration for Genotype, Phenotype, and Environmental Data for Model and Non-Model Plants*

- Joao Dorea, University of Wisconsin-Madison: *Democratizing the Access to Artificial Intelligence Solutions for Underrepresented and Non-Expert Communities*
- Carmela Rosaria Guadagno, University of Wyoming: *Cross-species Genomic Analysis of Photosystem II: Building Connections from Molecular Structure to Phenotype*
- Andrew Hess, University of Nevada-Reno: *GPS Collars for Managing Extensive Production Systems*
- Jinha Jung, Purdue University: *Sharing Unoccupied Aerial System (USA) Based High-Throughput Plant Phenotyping Data via Public Cloud*
- James Koltes, Iowa State University: *Harnessing Ag Genomics Data to Link Genotype to Phenotype*
- James Polashock, USDA-ARS GIFVL: *Developing a New Machine Learning Tool for Improved Genomic Selection in Non-Model Systems*
- Troy Rowan, University of Tennessee Institute of Agriculture: *Developing a Cost-Effective Method of Collecting Informative, Population-Level Molecular Phenotypes in Cattle*

Enabling Grants:

- Sruti Das Choudhury, University of Nebraska-Lincoln: *Event-Based Plant Phenotyping Using Deep Learning: Algorithms, Tools and Datasets*
- Courtney Daigle, Texas A&M: *Creation of a Database Designed to Promote Dairy Cow Welfare Using Non-Invasive Phenotypic Indicators of Heat Stress*

Establishing Grants:

- Kara Thornton, Utah State University: *Impact of Breed Type on Beef Production and Sustainability*

Round 3 Seed Grant RFP

Round 3 Seed Grant details will be available January 5, 2022. Projects that focus on broadening interactions and finding synergies across communities and organizational types are highly encouraged.

A **Mini Conference** is set for January 19, 10:30 AM-12:00 PM (CST) to discuss the priority topics, the seed grant mechanism and provide opportunities for discussion among participants. The Mini Conference will be held virtually through Zoom and is free to attend but registration is required. Watch the website for details and registration information.

Rolling Seed Grants for Community Activities/Working Groups

We are excited to share a new opportunity for funding community activities. This new type of grant was created in response to community needs and inquiries about supporting single events or working groups that do not otherwise meet the requirements of a regular “round”

seed grant. Eligible events include conferences, workshops, educational programming, and transdisciplinary community gatherings.

In particular, AG2PI is seeking proposals for working groups that will organize around an issue that affects both plant and animal sciences. Examples include data management, data standards, cross-kingdom techniques, technology development, training & recruiting a diverse workforce, and AI in agriculture. These new grants will be awarded on a rolling basis. See details at our website: <https://www.ag2pi.org/seed-grants/>.

INDIVIDUAL MEMBERSHIPS WITH AG2PI – JOIN US!

Get more involved with AG2PI by becoming a member. A *free* individual membership enables you to share your savvy in several ways. For example, you can volunteer to serve as ad hoc grant reviewer, help organize a field day or lead a training workshop. The membership form provides a space for you to report your interests and how you might like to offer your expertise.

Individual memberships are open to international colleagues, enabling more involvement and connections beyond U.S. borders. Go to the [Get Involved page](#) on the AG2PI website for details and the individual membership request form.

AG2PI SURVEY RESULTS

Results from the first AG2PI community survey are now available on the [AG2PI website](#). Community surveys help advise USDA NIFA on where to invest future monies as well as what resources are needed to achieve the community's goals. This could mean more training and learning opportunities, finding new ways to connect and collaborate with one another for improved research, or new standards being developed. Your voice matters and we hope you shared your thoughts with us. A second survey just wrapped up and we will be sharing its results soon.

UPCOMING EVENTS

December 15:

Field Day: Leveraging Microbiomes in Agriculture

10:30 am-12:00 pm (Central Time)

Featured speakers are Ben Holt, with AgBiome, Inc., who will present “The Challenges of Putting Microbes to Work for Human Benefit,” and Katie Lynn Summers, USDA Animal Biosciences and Biotechnology Lab, will discuss “Inter-Kingdom Communications in the Gut Bacteriome and Mycobiome of the Weanling Pig.”

To register, go to <https://tinyurl.com/AG2PI-FD14>

January 19: Hold the Date!

Seed Grant Mini Conference, online event

10:30 am-12:00 pm (Central Time)

Registration information to come.

Community Events: List your event with us! Submit information about a workshop, webinar, fellowship, or other event so we may share it on the AG2PI [Community Events](#) webpage. Complete the [submission form here](#).

PAST EVENTS

Recordings of previous field days, workshops, and conferences are accessible on the AG2PI website and YouTube channel. We encourage continuing the conversations begun in our field days by joining our [Slack Workspace](#) where each field day has its own channel. In Slack, you can review questions and answers discussed during the live session and ask your own questions through the field day channel.

The Agriculture Genome to Phenome Initiative (AG2PI) is a three-year project funded by the U.S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) awards 2020-70412-32615 and 2021-70412-35233 to build communities that address the challenges of genome to phenome (G2P) research across crops and livestock. AG2PI partners include Iowa State University, University of Nebraska, University of Arizona, University of Idaho, and the Iowa Corn Promotion Board.

Contact AG2PI: <https://www.ag2pi.org/contact-us/>
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