

Inside Ag | March 2023



Colyer, Reagan

A Message from the Dean

Dear Colleagues,

Happy Belated St. Patrick's Day to you all.

Earlier this month, I visited our congressional delegation in Washington, D.C. along with Mr. Dale Schuler, our representative on the Council on Agricultural Research, Extension and Teaching, and other MSU representatives. We had excellent visits with the offices of our four congressional representatives from Montana. We shared with them the research challenges important to Montana for consideration in the Farm Bill and the FY24 budget.



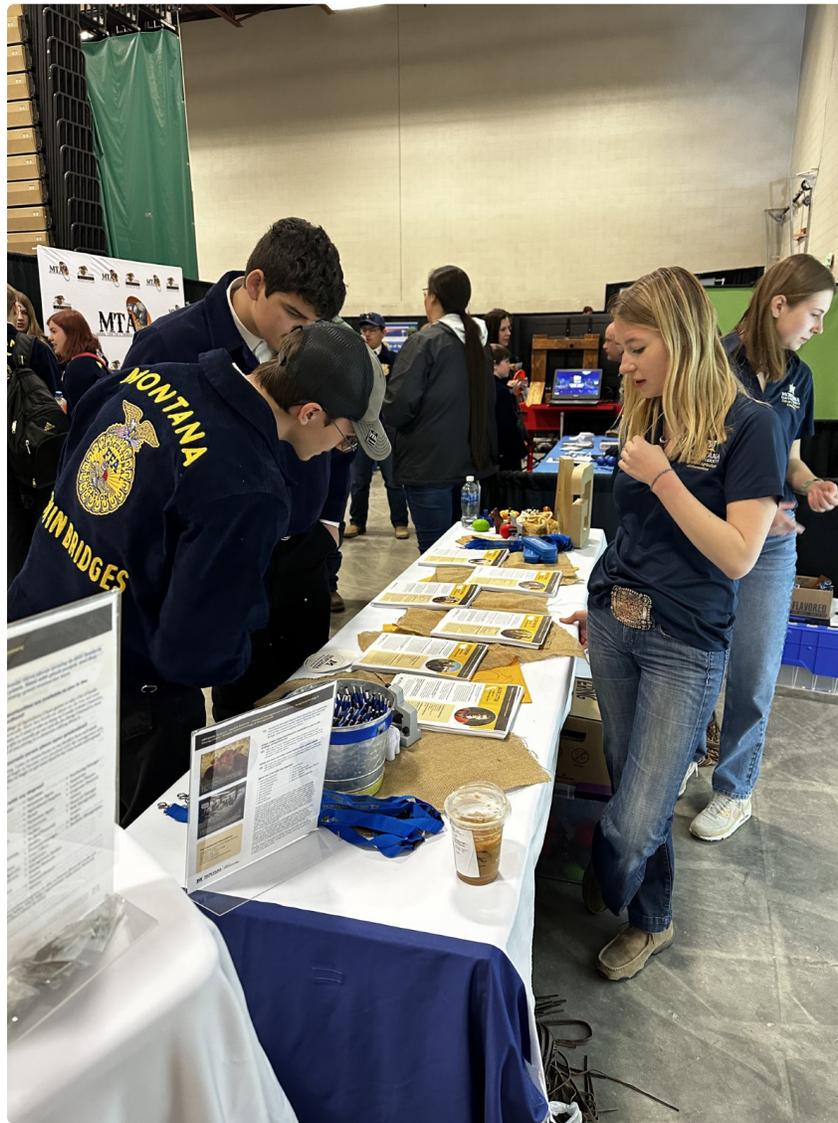
An exciting update from the state legislature: the combined request from MAES and Extension for base funding support for our precision agriculture program was

brought back as a decision package. It was voted by the House and will be moving forward to the Senate. This wouldn't have happened without strong, continued support from the agriculture producers of Montana, and we are so grateful.

I am pleased to announce that Laura Wilson joins us today, March 27, as the new assistant to the VP for Agriculture. She will be in the Dean's Office in Linfield Hall, and I am excited about the new ideas and energy she will bring to our college. Please take some time to introduce yourself to her and welcome her to our wonderful college family!

As many of you know, Susan Fraser will be leaving us after 10 years of service. It will be a big loss for the college, as many people think of Susan as the face of college. I join our entire COA/MAES family in thanking Susan for the many years she has given to our college and wishing her the very best in the next adventure she will be embarking on.

Dr. Sreekala Bajwa



Our Ag Ambassadors represented MSU spectacularly at the annual state FFA Convention in Great Falls March 22-25.



Thank you to these spectacular students for their hard work and dedication to engaging the next generation of Bobcats! (Thank you assistant dean Liz Greenfield for the photos.)

Announcements

- Former ARS professor **Raymond Ansotegui** passed away March 2. [You can read his obituary here](#). The Montana Stockgrowers Foundation has also started a scholarship fund in Dr. Ansotegui's name; [you can donate here](#).
- Professor emeritus **Nancy Callan**, formerly of the Western Ag Research Center, passed away March 16. We will share an obituary when we have one.
- The ARS department is pleased to welcome **Dan Atwater**, assistant professor of rangeland ecology! Dan can be reached in ABB 313 or

at daniel.atwater@montana.edu.

- Reagan Colyer, communications director, will host trainings on **how to effectively write impact statements** based on your research. If you haven't already responded to the poll with your preferred meeting times, [please do so here](#).
 - The **Fulbright Scholar Award** competition is now open. [More information can be found here](#) - be sure to share with interested students!
 - **Student employment opportunity:** NWARC is seeking summer employees/interns for its Field Crop Physiology Program. Interested students can reach out to Jessica Torrion or call 406-755-4303.
-

New Grants

- **Nine** new grants were awarded to COA/MAES faculty and staff in February, totaling more than **\$610,000**.

Recent Grants:

- **Lance McNew:** Evaluation of Motus technology for monitoring ground-dwelling birds. Montana's Outdoor Legacy Foundation. \$11,716
- **Chris Posbergh:** Evaluating the influence of breed and management on the carbon sequestration capacity of Montana range wool. Bair Ranch Foundation. \$25,925
- **Hayes Goosey:** Assessing Sulfur Fertilization as a Means to Improve Statewide Forage Quality and Value by Reducing Nitrate Accumulations in Cereal Forages. MT Fertilizer Advisory. \$62,693
- **Jamie Sherman, Hayes Goosey, Jessica Torrion, Kent McVay, Patrick Carr:** Relationship between fertility and water management, production and quality of advanced spring forage, feed and malt barley lines. MT Fertilizer Advisory. \$52,400.
- **Jessica Torrion, Hayes Goosey, Peggy Lamb:** Nitrogen requirement for sustained yield and optimal quality of cool-season perennial forages. MT Fertilizer Advisory. \$48,862.
- **Perry Miller, Clain Jones, Hayes Goosey, Stephanie Ewing, Manbir Rakkar:** pH remediation by perennial forages following 18yr of N management in alternative crop rotations. MT Fertilizer Advisory. \$26,643.

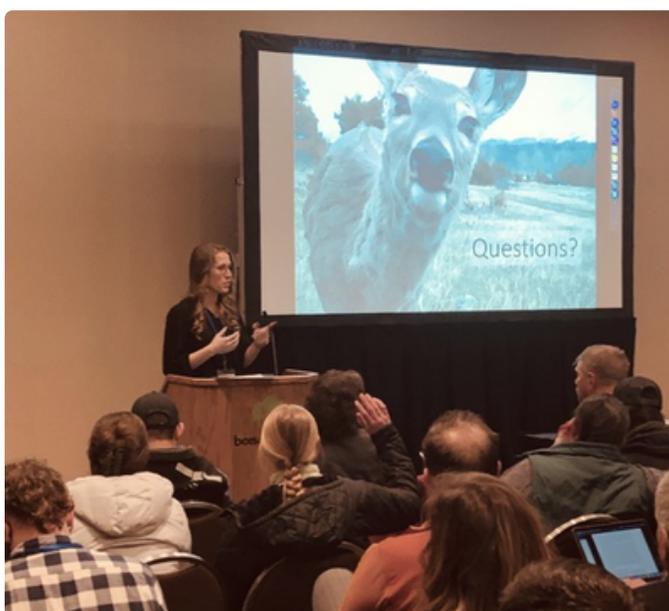
- **Mosley, J.C., D.A. McGranahan, C.L. Wonkka, S. Dangi, and J. Angerer:** Rangeland Resilience Following Wildfire: Opportunities for Livestock Grazing? USDA-NIFA. \$258,000
- **Jeff Mosley** also received \$1,000 gift from the Stillwater County Range Committee to support efforts in outreach youth education.
- **Sarah McCoski, Carl Yeoman:** The development of a bovine uterine organoid co-culture system for improved in vitro Embryogenesis. Bair Ranch Foundation. \$76,313.
- **Sarah McCoski, Rodrigo Marques, Makayla Ogg.** Maternal injectable mineral supplementation effects on progeny growth and reproductive performance. Bair Ranch Foundation. \$64,100.
- **Rodrigo Marques, Sarah McCoski, Christian Posbergh:** Maternal fatty acids supplementation and its impacts on offspring. National Sheep Improvement Center / USDA \$39,860.50
- **Sam Wyffels:** A synthesis of the literature related to conifer expansion and impacts to sustainable range beef cattle production across the western United States. National Cattleman's Beef Association. \$10,000
- **Susan Tuddenham, Rebecca Brotman, Carl Yeoman:** The vaginal microenvironment in asymptomatic versus symptomatic bacterial vaginosis. NIH-NIAID. \$482,098
- **Cornelia Jessen, Abigail Morgan, Carl Yeoman:** Exploring psychosocial, behavioral, and biomedical factors associated with reproductive and gynecological health among Alaska Native women. NIH-NIGMS-AK-INBRE. \$42,000.
- **Adam Sigler, Mari Eggers, Michelle Grocke:** Pilot funding - "Uncovering and addressing environmental health risks associated with Montana groundwater,"



The COA mourns the loss of former ARS professor Raymond Ansotegui. This image was shared by his daughter after his passing on March 2.



Around 50 people, including 15- 20 students, came to an equine educational presentation by Dr. Al Flint about biosecurity and backcountry first aid for horses (see images above and below). Feedback from attendees was wonderful.



Taylor Bayne presents at the Society for Range Management annual meeting in Boise (see below).

Funding Opportunities

- [USDA Organic Agriculture Research and Extension Initiative](#): Deadline 4/13/23
- [MSU Outreach and Engagement Council Seed Grant Program](#): Deadline 4/14/23
- [National Fish and Wildlife Foundation America the Beautiful Challenge 2023](#): Preliminary deadline 4/20/23
- [Bureau of Land Management Montana/Dakota Aquatic Resource Management](#): Deadline 5/1/23
- [Bureau of Land Management Montana/Dakota Cultural and Paleontological Resource Management](#): Deadline 5/4/23

- [USDA Gus Schumacher Nutrition Incentive Program](#): Final Deadline 5/4/23
- [NSF Plant Genome Research Program](#): proposals accepted anytime
- [Robert Wood Johnson Foundation Evidence for Action: Innovative Research to Advance Racial Equity](#): proposals accepted anytime
- [USDA Ag and Food Research Initiative - Foundational and Applied Science Program](#): due dates vary by program
- [USDA AFRI Sustainable Agricultural Systems Program](#): due dates vary

Upcoming Events

- The deadline to nominate awardees for the COA/MAES Awards of Excellence is **March 29**.
- The COA's Inaugural Three-Minute Thesis Competition will be held on **March 30** at 1:30 p.m. in SUB 235.
- The Bair Ranch Foundation Seminar "A Forest Service Approach to Leveraging Technology to Aid Public Land Administration" will be held at noon on **March 30** with speaker Matt Reeves, in ABB 134 or [via Webex here](#).
- The Montana Spring Biocontrol Meeting will be held **April 4** in Billings, with our own Jeff Littlefield presenting!
- A number of COA students will present at the **National Conference on Undergraduate Research** in Eau Claire, Wisconsin **April 13-14**. Participating students include:
 - Andee Baker, DATE
 - Emma Dardenne-Ankring, MCB
 - Jessica DeWit, MCB
 - Emory Hoelscher-Hull, MCB
 - Ella Horgan, MCB
 - Elsa O'Neill, Biotechnology
 - Natasha Peterson, MCB
 - Joseph Triem, MCB
 - Sarah Warnke, MCB
 - LaShae Zanca, MBC
- The Central and Eastern Montana Invasive Species Team will host an Eastern Heath Snail public meeting on **April 25** in Stanford, MT. Jeff Littlefield will also present at that meeting - thank you for your outreach, Dr. Littlefield!

COA/MAES in the news

<https://www.montana.edu/news/22754>

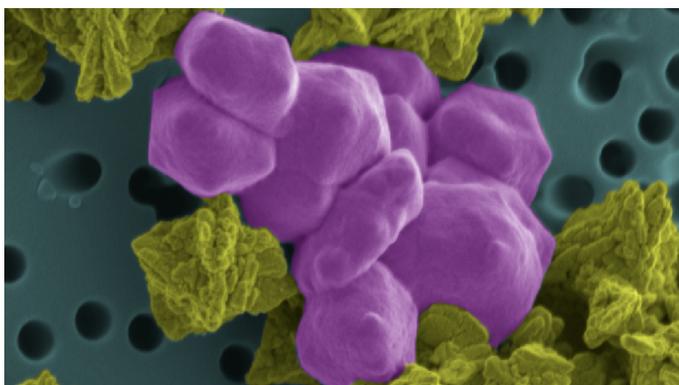


MSU alumnus appears on HBO rock climbing competition

www.montana.edu

Brad Burns competed on “The Climb,” hosted by champion rock climber Chris Sharma and actor Jason Momoa.

<https://www.montana.edu/news/22749/>



MSU professor Eric Boyd’s pyrite research featured by Department of Energy

www.montana.edu

Boyd’s work was selected as a “Science Highlight” by the DOE, which features particularly unique research from across the nation.

<https://www.montana.edu/news/22720>

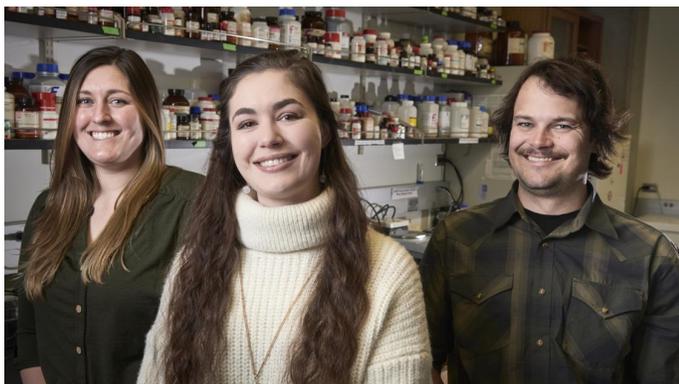


As soil acidity threatens Montana fields, Montana State research explores remedies

www.montana.edu

Manbir Rakkar and Clain Jones are examining ways to tailor responses to the emerging issue through on-farm experiments.

<https://www.montana.edu/news/22699>



Montana State research team publishes research into rare neurological disorder

www.montana.edu

Faculty and graduate students in five MSU labs collaborated to examine the effects of familial dysautonomia on the gut microbiomes of patients.

<https://www.krtv.com/news/montana-ag-network/ffa-students-show-off-creations-video>



FFA students show off creations (video)

www.krtv.com

FFA students from across Montana are meeting in Great Falls for the annual convention.

Awards and Recognitions

- **Mariana Carrera** of the DAEE accepted a position as Associate Editor at the [Journal of Economic Behavior and Organization](#). Dr. Carrera also served as a mentor in the American Economic Association's [CSWEP CeMENT program](#) and was promoted to Research Associate at the National Bureau for Economic Research. Congratulations, Dr. Carrera!
- **Taylor Bayne**, master's student in ARS, took third place in the oral presentation competition at the Society for Range Management's annual meeting in Boise, Idaho (see photo above). Bayne's presentation was titled, "Smart wildlife monitoring: Evaluating camera traps enabled with artificial intelligence." Faculty co-authors are **Jared Beaver, Lance McNew and Jeff Mosely**.
- **Jeff Mosley** was pictured in the Winter 2022/2023 issue of RANGE Magazine, teaching about rangeland health on the Spotted Dog Wildlife Management Area near Deer Lodge.

A Note from the Communications Director: Please submit newsletter items and/or story ideas to reagan.colyer@montana.edu. The newsletter will aim to go out the last Monday of each month, but submissions are accepted anytime.

Recap: Western Society of Weed Science and Western Aquatic Plant Management Society Meetings

The College of Agriculture was well-represented by faculty and students at the meeting of the Western Society of Weed Science and the Western Aquatic Plant Management Society in Boise, ID, from February 27 - March 2. Several graduate students and faculty presented (graduate students indicated by *):

Weeds of Range, Forest, and Natural Areas

- Long-term efficacy of indaziflam to suppress ventenata and response of other vegetation. Lilly Sencenbaugh*, Jane Mangold, Lisa Rew
- Long-term plant community response to cheatgrass management in high-elevation sagebrush steppe. Colter Mumford*, Jane Mangold, Catherine Zabinksi, Matthew Lavin, Lisa Rew
- Impact of native vegetation on cheatgrass fitness: A neighborhood competition study. Erin Teichroew*, Bruce Maxwell, and Lisa Rew
- Managing invasive annual grasses with an Indigenous integrated perspective. Ian McRyhew*, Tim Seipel, Laura Burkle, Virgil Dupuis, Jane Mangold
- Testing ventenata control treatments on the Crow Reservation in southeastern Montana. Zach Fighter*, Scott Powell, Jane Mangold, Robert Demery, David Hopkins
- Renovating crested wheatgrass monocultures into functional rangeland by integrating herbicide and seeding. Peter Bugoni*, Jane Mangold

Weeds of Agronomic Crops

- Influence of planting date and fall-applied soil active herbicides on weed control in chickpea. Akamjot Brar*, Qasim Khan, Fabian Menalled, Zach Miller, Clint Beiermann, Kent McVay, Lovreet Shergill
- Effect of seeding rate and herbicide applications on weed management and yield potential of chickpea. Het Desai*, Fabian Menalled, Tim Seipel, Lovreet Shergill
- Monitoring herbicide resistant weeds in sugarbeet cropping systems in SE Montana. Lovreet Shergill*, Het Desai, Todd Gaines
- Harvest weed seed control: A potential non-chemical weed management tool for cereal and corn/soybean rotations in SE Montana. Het Desai*, Fabian Menalled, Tim Seipel, Lovreet Shergill

Aquatic Weeds

- A centralized database of watermilfoil strains across the United States: Initial insights, and utility for stakeholder communication and management decision-making. Ashley Wolfe*, Ryan Thum, Raymond Newman
- Clonal diversity of invasive crested floating heart in the Southeastern United States. Zachary Kuzniar*, Ryan Thum
- Whole-genome sequencing of an herbicide selection experiment identifies a chromosomal region associated with fluridone resistance in Eurasian watermilfoil. Ryan Thum and gregory Chorak.

Erin Teichroew, MS student in LRES advised by Lisa Rew, took second place in the oral presentation contest for Weeds of Range, Forest and Natural Areas. Two students received scholarships to participate in the conference: **Lilly Sencenbaugh**, Ph.D. student in LRES advised by Lisa Rew, and **Zach Fighter**, M.S. student in LRES advised by Jane Mangold and Scott Powell. Additionally, **Teichroew, Sencenbaugh, and Colter Mumford**, Ph.D. student advised by Lisa Rew, received scholarships from College of Ag, the Graduate School and the LRES department.

Faculty participated in service activities, including: **Lovreet Shergill**, DRC, chaired the WERA77 meeting and Herbicide resistant plants committee and was a member of the poster committee; and **Jane Mangold**, LRES, served as Education and Regulatory Chair on the WSWS Board of Directors, organized and moderated "Water in the West: Implications for Weed Management" symposium and chaired a discussion session.

Recent Publications

- "[A brassinosteroid transcriptional regulatory network participates in regulating fiber elongation in cotton](#)," *Plant Physiology*: Le Liu, Guoquan Chen, Shengdong Li, Yu Gu, Lili Lu, Ghulam Qanmber, Venugopal Mendu, Zhao Liu, Fuguang Li, Zuoren Yang.
- "[A New Tytthonyx LeConte \(Coleoptera: Cantharidae\) from Dominican Amber, with Notes on Diagnostic Characters of West Indian Cantharids with Short Elytra](#)," *BioOne Complete*: Michael A. Ivie, Fabrizio Fanti, Vinicius S. Ferreira.
- "[A sensitive and specific genetically encoded potassium ion biosensor for in vivo applications across the tree of life](#)," *PLOS Biology*: Sheng-Yi Wu, Yurong

Wen, Nelson B. C. Serre, Cathrine Charlotte Heiede Laursen, Andrea Grostøl Dietz, Brian R. Taylor, Mikhail Drobizhev, Rosana S. Molina, Abhi Aggarwal, Vladimir Rancic, Michael Becker, Klaus Ballanyi, Kaspar Podgorski, Hajime Hirase, Maiken Nedergaard, Matyáš Fendrych, Joanne Lemieux, Daniel F. Eberl, Alan R. Kay, Robert E. Campbell, Yi Shen.

- "[A viral "codebreaker" intercepts a host alarm](#)," *Cell Host & Microbe*: Artem Nemudryi, Anna Nemudraia, Tanner Wiegand, Samuel H. Sternberg, Blake Wiedenheft.
- "[Abutilon theophrasti's Resilience against Allelochemical-Based Weed Management in Sustainable Agriculture – Due to Collection of Highly Advantageous Microorganisms?](#)" *Plants*. Tabaglio, Fiorini, Sterling, and Schultz.
- "[Analysis of Genetic Diversity and Population Structure of Cowpea \(*Vigna unguiculata* \(L.\) Walp\) Genotypes Using Single Nucleotide Polymorphism Markers](#)," *Plants*. Mbali Thembi Gumede, Abe Shegro Gerrano, Assefa Beyene Amelework, Albert Thembinkosi Modi.
- "[Assessing Youth Safety Knowledge through the Agriculture Experience Tracker \(AET\)](#)," *Journal of Agricultural Safety and Health*: Scott W. Smalley, Dustin K. Perry, Alyx Shultz, Rebecca G. Lawver, Michael L. Pate, Roger Hanagriff, Clay Ewell.
- "Associations among the genome, rumen metabolome, ruminal bacteria, and milk production in early-lactation Holsteins," *Journal of Dairy Science*. H.M. Golder, J. Thomson, J. Rehberger, A.H. Smith, E. Block, I.J. Lean.
- "[Carbon uptake in Eurasian boreal forests dominates the high-latitude net ecosystem carbon budget](#)," *Global Change Biology*: Jennifer D. Watts, Mary Farina, John S. Kimball, Luke D. Schiferl, Zhihua Liu, Kyle A. Arndt, Donatella Zona, Ashley Ballantyne, Eugénie S. Euskirchen, Frans-Jan W. Parmentier, Manuel Helbig, Oliver Sonntag, Torbern Tagesson, Janne Rinne, Hiroki Ikawa, Masahito Ueyama, Hideki Kobayashi, Torsten Sachs, Daniel F. Nadeau, John Kochendorfer, Marcin Jackowicz-Korczynski, Anna Virkkala, Mika Aureal, Roisin Commane, Brendan Byrne, Leah Birch, Matthew S. Johnson, Nima Madani, Brendan Rogers, Jinyang Du, Arthur Endsley, Kathleen Savage, Ben Poulter, Zhen Zhang, Lori M. Bruhwiler, Charles Miller, Scott Goetz, Walter C. Oeche.
- "Characterizing ruminal acidosis risk: A multiherd, multicountry study," *Journal of Dairy Science*. H.M. Golder, S.J. LeBlanc, T. Duffield, H.A. Rossow, R. Bogdanich, L. Hernandez, E. Block, J. Rehberger, A.H. Smith, J. Thomson, I.J. Lean.
- "[Comparison of Enrichment and Plating Media for Recovery of Virulent Strains of *Yersinia enterocolitica* from Inoculated Beef Stew](#)," *Journal of Food*

Protection: D.A. Schiemann.

- "[Control of acetolactate synthase-resistant Palmer amaranth in dry edible bean](#)," *Weed Technology*. Clint W. Beiermann, Cody F. Creech, Stevan Z. Knezevic, Amit J. Jhala, Robert Harveson, Nevin C. Lawrence.
- "[Dietary sugars and amino acids increase longevity and enhance reproductive parameters of Bracon cephi and B. lissogaster, two parasitoids that specialise on wheat stem sawfly](#)," *Physiological Entomology*. Laissa Cavallini, Robert K. D. Peterson, David K. Weaver.
- "[Effects of tillage and fallow rotation on wireworm populations and damage to cereal grain crops in Montana](#)," *Crop, Forage & Turfgrass Management*. Anuar Morales-Rodriguez, David Wichman, Kevin W. Wanner.
- "[Efficient extraction of atomization processes from high-fidelity simulations](#)," *Computers & Fluids*. Brendan Christensen, Mark Owkes.
- "[Electrospun polycaprolactone scaffolds loaded with a 1,4-naphthoquinone derivative for anticancer therapy](#)," *Materials Letters*. Nadezhda V. Danilenko, Evgeny N. Bolbasov, Andrei I. Khlebnikov, Igor A. Schepetkin, Sergei I. Tverdokhlebov, Mark T. Quinn.
- "[Evaluation of wheat stem sawfly-resistant solid stem Qss.msub-3BL alleles in hard red winter wheat](#)," *Crop Science*. Mei Ling Wong, Philip L. Bruckner, Jim E. Berg, Peggy F. Lamb, Megan L. Hofland, Christopher G. Caron, Nancy K. Blake, David K. Weaver, Jason P. Cook.
- "[Generic Aversion and Observational Learning in the Over-the-Counter Drug Market](#)," *American Economic Journal - Applied Economics* (accepted).
- "[Global distribution and climate sensitivity of the tropical montane forest nitrogen cycle](#)," *Nature Communications*. Justin D. Gay, Bryce Currey, E. N. J. Brookshire.
- "[Gut microbiome dysbiosis drives metabolic dysfunction in Familial dysautonomia](#)," *Nature Communications*. Alexandra M. Cheney, Stephanann M. Costello, Nicholas V. Pinkham, Annie Waldum, Susan C. Broadway, Maria Cotrina-Vidal, Marc Mergy, Brian Tripet, Douglas J. Kominsky, Heather M. Grifka-Walk, Horacio Kaufmann, Lucy Norcliffe-Kaufmann, Jesse T. Peach, Brian Bothner, Frances Lefcort, Valérie Copié, Seth T. Walk.
- "[Identification of DOT1L inhibitor in a screen for factors that promote dopaminergic neuron survival](#)," *Frontiers in Aging Neuroscience*. Jun Cui, Joseph Carey, Renee A. R. Pera.
- "[Impacts of Rumen Degradable or Undegradable Protein Supplementation on Supplement Intake and Performance of Yearling Heifers and Cows Grazing Dryland Pastures](#)," *Animals*. Marley K. Manoukian, Timothy DelCurto, Janessa

Kluth, T. J. Carlisle, Noah Davis, Makae Nack, Samuel A. Wyffels, Abe Scheaffer, Tom W. Geary, Megan L. Van Emon.

- "Importance of Foot and Leg Structure for Beef Cattle in Forage-Based Production Systems," *Animals*. Taylre Sitz, Hannah DelCurto-Wyffels, Megan Van Emon, Sam Wyffels, Kelli Retallick, Esther Tarpoff, Kurt Kangas, Tim DelCurto.
- "[In vivo mechanotransduction: Effect of acute exercise on the metabolomic profiles of mouse synovial fluid](#)," *Physiological Entomology*: Laissa Cavallini, Robert K. D. Peterson, David K. Weaver.
- "[Influences of increasing levels of sulfate in drinking water on the intake and use of low-quality forages by beef cattle](#)," *Applied Animal Science*: Samuel A. Wyffels, Megan L. Van Emon, Makae F. Nack, Marley K. Manoukian, Tanner J. Carlisle, Noah G. Davis, Janessa A. Kluth, Hannh M. DelCurto-Wyffels, Timothy DelCurto.
- "[Iron Minerals Influence the Assembly of Microbial Communities in a Basaltic Glacial Catchment](#)," *Microbiology Ecology*: Eric C. Dunham, Lisa M. Keller, Mark L. Skidmore, K Rebecca Mitchell, Eric S. Boyd.
- "[Listening holistically: one village's path to address child malnutrition in Mali](#)," *African Geographical Review*: Florence V. Dunkel, Holly Hunts, Nathaniel Sisson, Ada Giusti, Ibrahima Traore, Hawa Coulibaly.
- "[Missense alleles of the HMW glutenin subunits Dx5 and Dy10 have small changes in function relative to missense changes in Puroindoline a and b](#)," *Cereal Chemistry*: John M. Martin, Jinrui Zhang, Andrew C. Hogg, Michael J. Giroux.
- "[Mutation in the Endo-beta-1,4-glucanase \(KORRIGAN\) Is Responsible for Thick Leaf Phenotype in Sorghum](#)," *Plants*: Lavanya Mendu, Gayani Jalathge, Kamalpreet Kaur Dhillon, Nagendra Pratap Singh, Vimal Kumar Balasubramanian, Rebecca Fewou, Dennis C. Gitz III, Junping Chen, Zhanguo Xin, Venugopal Mendu.
- "[Nanopore sequencing of plasmid cleavage fragments produced with type III CRISPR-associated nucleases NucC, Can1 and Can2](#)," *Zenodo*: Artem Nemudryi, Anna Nemudraia, Blake Wiedenheft.
- "[Neutrophil Immunomodulatory Activity of Nerolidol, a Major Component of Essential Oils from Populus balsamifera Buds and Propolis](#)," *Plants*: Igor A. Schepetkin, Gulmira Özek, Temel Özek, Liliya Kirpotina, Polina I. Kokorina, Andrei Khlebnikov, Mark T. Quinn.
- "[Rapid upwards spread of non-native plants in mountains across continents](#)," *Nature Ecology & Evolution*: Evelin Iseli, Chelsea Chisholm,

Johnathan Lenoir, Sylvia Haider, Tim Seipel, Agustina Barros, Anna L. Hargreaves, Paul Kardol, Jonas J. Lembrechts, Keith McDougall, Irfan Rashid, Sabine B. Rumpf, José Ramón Arévalo, Lohengrin Cavieres, Curtis Daehler, Pervaiz A. Dar, Bryan Endress, Gabi Jakobs, Alejandra Jiménez, Christoph Küffer, Maritza Mihoc, Ann Malbau, John W. Morgan, Bridgett J. Naylor, Aníbal Pauchard, Amanda Ratier Backes, Zafar A. Reshi, Lisa J. Rew, Damiano Righetti, James M. Shannon, Graciela Valencia, Neville Walsh, Genevieve T. Wright, Jake M. Alexander.

- ["https://injuryprevention.bmj.com/content/early/2023/03/14/ip-2022-044815](https://injuryprevention.bmj.com/content/early/2023/03/14/ip-2022-044815)
- [Rear-facing child safety seat effectiveness: evidence from motor vehicle crash data,"](#) *Injury Prevention*. D Mark Anderson, Ridge Peterson.
- ["Recent and future declines of a historically widespread pollinator linked to climate, land cover, and pesticides,"](#) *Proceedings of the National Academy of Sciences*: William M. Janousek, Margaret R. Douglas, Syd Cannings, Marion A. Clément, Casey M. Delphia, Jeffrey G. Everett, Richard G. Hatfield, Douglas A. Keinath, Jonathan B. U. Koch, Lindsie M. McCabe, John M. Mola, Jane E. Ogilvie, Intiaz Rangwala, Leif L. Richardson, Ashley T. Rohde, James P. Strange, Lusha M. Tronstad, Tabitha A. Graves.
- ["Relationships between fluid mixing, biodiversity, and chemosynthetic primary productivity in Yellowstone hot springs,"](#) *Environmental Microbiology*: Maria C. Fernandes-Martins, Daniel R. Colman, Eric S. Boyd.
- ["Roughage level and supplemental fat for newly received finishing calves: effects on growth performance, health, and physiological responses,"](#) *Journal of Animal Science*: Vinícius N Gouvêa, Mario O. Oliveira, Hiam Jardel M. Giacomelli, Eduardo A. Colombo, Fernanda Batistel, Flávio A P Santos, Glenn C. Duff, Rodrigo S. Marques, Reinaldo F. Cooke.
- ["Scratching the Surface Takes a Toll: Immune Recognition of Viral Proteins by Surface Toll-like Receptors,"](#) *Viruses*: Alexis A. Hatton, Fermin E. Guerra.
- ["Screening Bambara Groundnut \(*Vigna subterranea* L. Verdc\) Genotypes for Drought Tolerance at the Germination Stage under Simulated Drought Conditions,"](#) *Plants*: Sithembile Kunene, Alfred Oduor Odindo, Abe Shegro Gerrano, Takudzwa Madizvo.
- ["Sequence-specific capture and concentration of viral RNA by type III CRISPR system enhances diagnostic,"](#) *Nature Communications*. Anna Nemudraia, Artem Nemudryi, Murat Buyukyoruk, Andrew M. Scherffius, Trevor Zahl, Tanner Wiegand, Shishir Pandey, Joseph E. Nichols, Laina N. Hall, Aidan McVey, Helen H. Lee, Royce A. Wilkinson, Laura R. Snyder, Joshua D. Jones, Kristin S. Koutmou, Andrew Santiago-Frangos, Blake Wiedenheft.

- "[Soil bacterial community response to cover crop introduction in a wheat-based dryland cropping system](#)," *Frontiers in Sustainable Food Systems*: Jed O. Eberly, Maryse Bourgault, Julia M. Dafo, Carl J. Yeoman, Samuel A. Wyffels, Peggy F. Lamb, Darrin L. Boss.
- "[Sourcing thermotolerant poly\(ethylene terephthalate\) hydrolase scaffolds from natural diversity](#)," *Nature Communications*: Erika Erickson, Japheth E. Gado, Luisana Avilán, Felicia Bratti, Richard K. Brizendine, Paul A. Cox, Raj Gill, Rosie Graham, Dong-Jin Kim, Gerhard König, Willaim E. Michener, Saroj Poudel, Saroj Poudel, Kelsey J. Ramirez, Thomas J. Shakespeare, Michael Zahn, Eric S. Boyd, Christina M. Payne, Jennifer L. DuBois, Andrew R. Pickford, Gregg T. Beckham, John E. McGeehan.
- "[Temperature, Worker Productivity, and Adaptation: Evidence from Survey Data Production](#)," *American Economic Journal: Applied Economics*: Melissa LoPalo.
- "[The Bark-Gnawing Beetles of Montana, USA \(Coleoptera: Trogossitidae, Peltidae, and Lophocateridae\), Including New Substantial Distributional Records for *Tenebroides collaris* \(Sturm\)](#)," *BioOne Complete*: Michael G. Kippenhan.
- "[The matricellular protein *Drosophila* CCN is required for synaptic transmission and female fertility](#)," *Genetics*: Elizabeth Catudio Garrett, Ashley M. Bielawski, Evelyne Ruchti, Lewis M. Sherer, Indrayani Waghmare, David Hess-Homeier, Brian D. McCabe, R. Steven Stowers, Sarah J. Certel.
- "[The spillover effects of parental verbal conflict on classmates' cognitive and noncognitive outcomes](#)," *Economic Inquiry*: Weina Zhou, Andrew J. Hill.
- "[Thioredoxin reductase 1 regulates hepatic inflammation and macrophage activation during acute cholestatic liver injury](#)," *Hepatology Communications*: Colin T. Shearn, Aimee L. Anderson, Colin G. Miller, Reed C. Noyd, Michael W. Devereaux, Nata Balasubramanian, David J. Orlicky, Edward E. Schmidt, Ronald J. Sokol.
- "[Traits that distinguish dominant species across aridity gradients differ from those that respond to soil moisture](#)," *Oecologica*: Robert J. Griffin-Nolan, Andrew J. Felton, Ingrid J. Slette, Melinda D. Smith, Alan K. Knapp.
- "[Transcriptional responses to 2,4-D herbicide treatment of a Eurasian \(*Myriophyllum spicatum*\) and a hybrid \(*M. spicatum* × *M. sibiricum*\) genotype of watermilfoil that differ in their sensitivity to 2,4-](#)" *Aquatic Botany*: Gregory M. Chorak, Fernando H. Correr, Jennifer Lachowiec, Gillian Reynolds, Ryan A. Thum.

- "[Tryptophan metabolite activation of the aryl hydrocarbon receptor regulates IL-10 receptor expression on intestinal epithelia](#)," *Mucosal Immunology*. J. M. Lanis, E. E. Alexeev, V. F. Curtis, D. A. Kitzenberg, D. J. Kao, K. D. Battista, M. E. Gerich, L. E. Glover, D. J. Kominsky, S. P. Colgan.
- "Virtually the same? Evaluating the effectiveness of remote undergraduate research experiences," *CBE-Life Sciences Education*. Hess RA, Erickson OA, Cole RB, Isaacs JM, Eggers MJ, Shaw C (et al.), Dolan EL. 2023.