

Publications during 2020 acknowledging the Roy J. Carver Biotechnology Center at the University of Illinois at Urbana-Champaign

Adhikari, P., Goodrich, E., Fernandes, S.B., Lipka, A.E., Tranl, P., Brown, P. and Jamann, T.M., 2020. Genetic variation associated with PPO-inhibiting herbicide tolerance in sorghum. *PLoS one*, 15(10), p.e0233254.

Amengual, J., Coronel, J., Marques, C., Aradillas-García, C., Morales, J.M.V., Andrade, F.C., Erdman Jr, J.W. and Teran-Garcia, M., 2020. β -Carotene oxygenase 1 activity modulates circulating cholesterol concentrations in mice and humans. *The Journal of nutrition*, 150(8), pp.2023-2030.

Anderson, N.T., Weyant, K.B. and Mukherjee, A., 2020. Characterization of flavin binding in oxygen-independent fluorescent reporters. *AIChE Journal*, 66(12), p.e17083.

Asiamah, E.K., Vailati-Riboni, M., Loor, J.J., Worku, M. and won Kang, H., REGULAR ARTICLE SUPPLEMENTAL METHIONINE, CHOLINE, OR TAURINE AFFECT GALECTIN GENE EXPRESSION IN ADULT HOLSTEIN COW AND NEONATAL HOLSTEIN CALF NEUTROPHILS IN VITRO.

Bankers, L., Dahan, D., Neiman, M., Adrian-Tucci, C., Frost, C., Hurst, G.D. and King, K.C., 2020. Invasive freshwater snails form novel microbial relationships. *Evolutionary Applications*.

Barakat, R., Lin, P.C., Park, C.J., Zeineldin, M., Zhou, S., Rattan, S., Brehm, E., Flaws, J.A. and Ko, C.J., 2020. Germline-dependent transmission of male reproductive traits induced by an endocrine disruptor, di-2-ethylhexyl phthalate, in future generations. *Scientific reports*, 10(1), pp.1-18.

Barclay, R.D., Beals, J.W., Drnevich, J., Imai, B.S., Yau, P.M., Ulanov, A.V., Tillin, N.A., Villegas-Montes, M., Paluska, S.A., Watt, P.W. and De Lisio, M., 2020. Ingestion of lean meat elevates muscle inositol hexakisphosphate kinase 1 protein content independent of a distinct post-prandial circulating proteome in young adults with obesity. *Metabolism*, 102, p.153996.

Barelli, C., Albanese, D., Stumpf, R.M., Asangba, A., Donati, C., Rovero, F. and Hauffe, H.C., 2020. The gut microbiota communities of wild arboreal and ground-feeding tropical primates are affected differently by habitat disturbance. *Msystems*, 5(3).

Behnke, G.D., Zabaloy, M.C., Riggins, C.W., Rodríguez-Zas, S., Huang, L. and Villamil, M.B., 2020. Acidification in corn monocultures favor fungi, ammonia oxidizing bacteria, and nirK-denitrifier groups. *Science of the Total Environment*, 720, p.137514.

Bentel, M.J., Yu, Y., Xu, L., Kwon, H., Li, Z., Wong, B.M., Men, Y. and Liu, J., 2020. Degradation of perfluoroalkyl ether carboxylic acids with hydrated electrons: structure–reactivity relationships and environmental implications. *Environmental science & technology*, 54(4), pp.2489-2499.

Bernardi, R.C., Doden, H.L., Melo, M.C., Devendran, S., Pollet, R.M., Mythen, S.M., Bhowmik, S., Lesley, S.A., Cann, I., Luthey-Schulten, Z. and Koropatkin, N.M., 2020. Bacteria on steroids: the enzymatic mechanism of an NADH-dependent dehydrogenase that regulates the conversion of cortisol to androgen in the gut microbiome. *bioRxiv*.

Berding, K. and Donovan, S.M., 2020. Dietary Patterns Impact Temporal Dynamics of Fecal Microbiota Composition in Children With Autism Spectrum Disorder. *Frontiers in nutrition*, 6, p.193.

Borgogna, J.L.C., Shardell, M.D., Yeoman, C.J., Ghanem, K.G., Kadriu, H., Ulanov, A.V., Gaydos, C.A., Hardick, J., Robinson, C.K., Bavoil, P.M. and Ravel, J., 2020. The association of Chlamydia trachomatis and Mycoplasma genitalium infection with the vaginal metabolome. *Scientific reports*, 10(1), pp.1-10.

Bornowski, N., Hamilton, J.P., Liao, P., Wood, J.C., Dudareva, N. and Buell, C.R., 2020. Genome sequencing of four culinary herbs reveals terpenoid genes underlying chemodiversity in the Nepetoideae. *DNA Research*, 27(3), p.dsaa016.

Brandt, K., Nethery, M.A., O'Flaherty, S. and Barrangou, R., 2020. Genomic characterization of *Lactobacillus fermentum* DSM 20052. *BMC genomics*, 21, pp.1-13.

Branham, S.E., Daley, J., Levi, A., Hassell, R. and Wechter, W.P., 2020. QTL Mapping and Marker Development for Tolerance to Sulfur Phytotoxicity in Melon. *Translational Research for Cucurbit Molecular Breeding: Traits, Markers, and Genes*.

Branham, S.E., Daley, J., Levi, A., Hassell, R. and Wechter, W.P., 2020. QTL Mapping and Marker Development for Tolerance to Sulfur Phytotoxicity in Melon (*Cucumis melo*). *Frontiers in Plant Science*, 11, p.1097.

Breitenbach, A.T., Carter, A.W., Paitz, R.T. and Bowden, R.M., 2020. Using naturalistic incubation temperatures to demonstrate how variation in the timing and continuity of heat wave exposure influences phenotype. *Proceedings of the Royal Society B*, 287(1932), p.20200992.

Brown, S.P., Grillo, M.A., Podowski, J.C. and Heath, K.D., 2020. Soil origin and plant genotype structure distinct microbiome compartments in the model legume *Medicago truncatula*. *Microbiome*, 8(1), pp.1-17.

Byun, S., Seok, S., Kim, Y.C., Zhang, Y., Yau, P., Iwamori, N., Xu, H.E., Ma, J., Kemper, B. and Kemper, J.K., 2020. Fasting-induced FGF21 signaling activates hepatic autophagy and lipid degradation via JMJD3 histone demethylase. *Nature communications*, 11(1), pp.1-15.

Cabello, A.M., Turk-Kubo, K.A., Hayashi, K., Jacobs, L., Kudela, R.M. and Zehr, J.P., 2020. Unexpected presence of the nitrogen-fixing symbiotic cyanobacterium UCYN-A in Monterey Bay, California. *Journal of phycology*, 56(6), pp.1521-1533.

Campbell, D.E., Ly, L.K., Ridlon, J.M., Hsiao, A., Whitaker, R.J. and Degnan, P.H., 2020. Infection with *Bacteroides* Phage BV01 Alters the Host Transcriptome and Bile Acid Metabolism in a Common Human Gut Microbe. *Cell Reports*, 32(11), p.108142.

Campbell-Staton, S.C., Winchell, K.M., Rochette, N.C., Fredette, J., Maayan, I., Schweizer, R.M. and Catchen, J., 2020. Parallel selection on thermal physiology facilitates repeated adaptation of city lizards to urban heat islands. *Nature ecology & evolution*, 4(4), pp.652-658.

Capodiferro, M.R., Raveane, A., Rambaldi Migliore, N., Colombo, G., Ongaro, L., Rivera, J., Mendizábal, T., Hernández-Mora, I., Tribaldos, M., Perego, U.A. and Scheib, C.L., 2020. Archaeogenomic Distinctiveness of the Istmo-Colombian Area.

Caputo, M.P., Williams, J.N., Drnevich, J., Radlowski, E.C., Larsen, R.J., Sutton, B.P., Leyshon, B.J., Hussain, J., Nakamura, M.T., Kuchan, M.J. and Das, T., 2020. Hydrolyzed Fat Formula Increases Brain White Matter in Small for Gestational Age and Appropriate for Gestational Age Neonatal Piglets. *Frontiers in pediatrics*, 8, p.32.

Carles, L. and Artigas, J., 2020. Interaction between glyphosate and dissolved phosphorus on bacterial and eukaryotic communities from river biofilms. *Science of the Total Environment*, 719, p.137463.

Casas, G.A., Blavi, L., Cross, T.W.L., Lee, A.H., Swanson, K.S. and Stein, H.H., 2020. Inclusion of the direct-fed microbial *Clostridium butyricum* in diets for weanling pigs increases growth performance and tends to increase villus height and crypt depth, but does not change intestinal microbial abundance. *Journal of animal science*, 98(1), p.skz372.

Cedeño, D.L., Smith, W.J., Kelley, C.A. and Vallejo, R., 2020. Spinal cord stimulation using differential target multiplexed programming modulates neural cell-specific transcriptomes in an animal model of neuropathic pain. *Molecular pain*, 16, p.1744806920964360.

Chee-Sanford, J.C., Connor, L., Krichels, A., Yang, W.H. and Sanford, R.A., 2020. Hierarchical detection of diverse Clade II (atypical) nosZ genes using new primer sets for classical-and multiplex PCR array applications. *Journal of microbiological methods*, 172, p.105908.

Chen, J.W.E., Lumibao, J., Leary, S., Sarkaria, J.N., Steelman, A.J., Gaskins, H.R. and Harley, B.A., 2020. Crosstalk between microglia and patient-derived glioblastoma cells inhibit invasion in a three-dimensional gelatin hydrogel model. *Journal of neuroinflammation*, 17(1), pp.1-15.

Chen, W.T., Wu, Z., Si, B. and Zhang, Y., 2020. Renewable diesel blendstocks and bioprivileged chemicals distilled from algal biocrude oil converted via hydrothermal liquefaction. *Sustainable Energy & Fuels*, 4(10), pp.5165-5178.

Chen, Y., Sheppard, D., Dong, X., Hu, X., Chen, M., Chen, R., Chakrabarti, J., Zavros, Y., Peek, R.M. and Chen, L.F., 2020. *H. pylori* infection confers resistance to apoptosis via Brd4-dependent BIRC3 eRNA synthesis. *Cell death & disease*, 11(8), pp.1-14.

Choe, E. and Williams, M.M., 2020. Expression and comparison of sweet corn CYP81A9s in relation to nicosulfuron sensitivity. *Pest management science*, 76(9), pp.3012-3019.

Clark, L.V., Mays, W., Lipka, A.E. and Sacks, E.J., 2020. A population-level statistic for assessing Mendelian behavior of genotyping-by-sequencing data from highly duplicated genomes. *BioRxiv*.

Cleveland, B.M., Gao, G., Radler, L.M. and Picklo, M.J., 2020. Hepatic Fatty Acid and Transcriptome Profiles during the Transition from Vegetable-to Fish Oil-Based Diets in Rainbow Trout (*Oncorhynchus mykiss*). *Lipids*.

Cleveland, B.M., Gao, G. and Leeds, T.D., 2020. Transcriptomic response to selective breeding for fast growth in rainbow trout (*Oncorhynchus mykiss*). *Marine Biotechnology*, 22, pp.539-550.

Cotto, I., Dai, Z., Huo, L., Anderson, C.L., Vilardi, K.J., Ijaz, U., Khunjar, W., Wilson, C., De Clippeleir, H., Gilmore, K. and Bailey, E., 2020. Long solids retention times and attached growth phase favor prevalence of comammox bacteria in nitrogen removal systems. *Water research*, 169, p.115268.

Cotul, E.K., Zuo, Q., Santaliz-Casiano, A., Imir, O.B., Mogol, A.N., Tunc, E., Duong, K., Lee, J.K., Ramesh, R., Odukoya, E. and Kesavadas, M.P., 2020. Combined Targeting of Estrogen Receptor Alpha and Exportin 1 in Metastatic Breast Cancers. *Cancers*, 12(9), p.2397.

Curtis, A.N., Tiemann, J.S., Douglass, S.A., Davis, M.A. and Larson, E.R., 2020. High stream flows dilute environmental DNA (eDNA) concentrations and reduce detectability. *Diversity and Distributions*.

Dahan, D., Preston, G.M., Sealey, J. and King, K.C., 2020. Impacts of a novel defensive symbiosis on the nematode host microbiome. *BMC microbiology*, 20(1), pp.1-10.

D'Alessandro-Gabazza, C.N., Kobayashi, T., Yasuma, T., Toda, M., Kim, H., Fujimoto, H., Hataji, O., Takeshita, A., Nishihama, K., Okano, T. and Okano, Y., 2020. A Staphylococcus pro-apoptotic peptide induces acute exacerbation of pulmonary fibrosis. *Nature communications*, 11(1), pp.1-17.

Davis, M., Harper, L.R., Molano-Flores, B., Benito, M.J. and Niemiller, M.L., 2020. SERDP Project RC19-1102.

Deerhake, M.E., Danzaki, K., Inoue, M., Cardakli, E.D., Nonaka, T., Aggarwal, N., Barclay, W.E., Ji, R.R. and Shinohara, M.L., 2020. Dectin-1 limits central nervous system autoimmunity through a non-canonical pathway. *bioRxiv*.

de Jesus Astacio, L.M., Prabhakara, K.H., Li, Z., Mickalide, H. and Kuehn, S., 2020. Closed microbial communities self-organize to persistently cycle carbon. *bioRxiv*.

Demircan, B., Yucel, B. and Radosevich, J.A., 2020. DNA methylation in human breast cancer cell lines adapted to high nitric oxide. *in vivo*, 34(1), pp.169-176.

de Moya, R.S., Yoshizawa, K., Walden, K.K., Sweet, A.D., Dietrich, C.H. and Johnson, K.P., 2020. Phylogenomics of parasitic and non-parasitic lice (Insecta: Psocodea): combining sequence data and exploring compositional bias solutions in Next Generation Datasets. *Systematic Biology*.

Deschamps, C., Fournier, E., Uriot, O., Lajoie, F., Verdier, C., Comtet-Marre, S., Thomas, M., Kapel, N., Cherbuy, C., Alric, M. and Almeida, M., 2020. Comparative methods for fecal sample storage to preserve gut microbial structure and function in an in vitro model of the human colon. *Applied Microbiology and Biotechnology*, 104(23), pp.10233-10247.

Dewey, M.J., Johnson, E.M., Slater, S.T., Milner, D.J., Wheeler, M.B. and Harley, B.A., 2020. Mineralized collagen scaffolds fabricated with amniotic membrane matrix increase osteogenesis under inflammatory conditions. *Regenerative Biomaterials*, 7(3), pp.247-258.

Dewey, M.J., Nosatov, A.V., Subedi, K., Shah, R., Jakus, A. and Harley, B.A., 2020. Inclusion of a polylactide-co-glycolide co-polymer mesh enhances osteogenesis in mineralized collagen scaffolds. *bioRxiv*.

Dewey, M.J., Nosatov, A.V., Subedi, K. and Harley, B., 2020. Anisotropic mineralized collagen scaffolds accelerate osteogenic response in a glycosaminoglycan-dependent fashion. *RSC advances*, 10(26), pp.15629-15641.

DeWerff, S.J., Bautista, M.A., Pauly, M., Zhang, C. and Whitaker, R.J., 2020. Killer archaea: Virus-mediated antagonism to CRISPR-immune populations results in emergent virus-host mutualism. *MBio*, 11(2).

Doden, H., Alves, J.M. and Ridlon, J.M., 2020. Identification and characterization of a gene encoding NADP (H)-dependent bile acid 12 β -hydroxysteroid dehydrogenase from Clostridium paraputreficum ATCC 25780. bioRxiv.

Doña, J., Herrera, S.V., Nyman, T., Kunnasranta, M. and Johnson, K.P., 2020. Patterns of microbiome variation among infrapopulations of permanent bloodsucking parasites. bioRxiv.

Douglas, M.R., Anthonysamy, W.J., Davis, M.A., Mulligan, M.P., Schooley, R.L., Louis, W. and Douglas, M.E., 2020. Metapopulation connectivity in Voles (*Microtus* sp.) as a gauge for tallgrass prairie restoration in midwestern North America. bioRxiv.

Edwards, J.D., Yang, W.H. and Yannarell, A.C., 2020. Invasive garlic mustard demonstrates stronger relationships with pathotrophic than mycorrhizal fungi. bioRxiv.

Ellerbrock, R.E., Canisso, I.F., Roady, P.J., Litsky, A., Durgam, S., Podico, G., Li, Z. and Lima, F.S., 2020. Administration of enrofloxacin during late pregnancy failed to induce lesions in the resulting newborn foals. Equine veterinary journal, 52(1), pp.136-143.

Fang, J., Wood, A.M., Chen, Y., Yue, J. and Ming, R., 2020. Genomic variation between PRSV resistant transgenic SunUp and its progenitor cultivar Sunset. BMC genomics, 21(1), pp.1-21.

Ellerbrock, R.E., Curcio, B.R., Zhong, L., Honoroto, J., Wilkins, P., Lima, F.S., Giguere, S. and Canisso, I.F., 2020. Pharmacokinetics of intravenous and oral administration of enrofloxacin to the late-term pregnant and non-pregnant mares. Equine veterinary journal, 52(3), pp.464-470.

Elolimy, A., Alharthi, A., Zeineldin, M., Parys, C. and Loor, J.J., 2020. Residual feed intake divergence during the preweaning period is associated with unique hindgut microbiome and metabolome profiles in neonatal Holstein heifer calves. Journal of animal science and biotechnology, 11(1), pp.1-15.

Espinosa, C.D., Fry, R.S., Kocher, M.E. and Stein, H.H., 2020. Effects of copper hydroxychloride on growth performance and abundance of genes involved in lipid metabolism of growing pigs. Journal of animal science, 98(1), p.skz369.

Falagan-Lotsch, P. and Murphy, C.J., 2020. Network-based analysis implies critical roles of microRNAs in the long-term cellular responses to gold nanoparticles. Nanoscale, 12(41), pp.21172-21187.

Fazal, Z., Singh, R., Fang, F., Bikorimana, E., Baldwin, H., Corbet, A., Tomlin, M., Yerby, C., Adra, N., Albany, C. and Lee, S., 2020. Hypermethylation and global remodelling of DNA methylation is associated with acquired cisplatin resistance in testicular germ cell tumours. Epigenetics, pp.1-14.

Fleming, S.A., Mudd, A.T., Hauser, J., Yan, J., Metairon, S., Steiner, P., Donovan, S.M. and Dilger, R.N., 2020. Dietary Oligofructose Alone or in Combination with 2'-Fucosyllactose Differentially Improves Recognition Memory and Hippocampal mRNA Expression. *Nutrients*, 12(7), p.2131.

Forsthoefel, D.J., Cejda, N.I., Khan, U.W. and Newmark, P.A., 2020. Cell-type diversity and regionalized gene expression in the planarian intestine. *Elife*, 9, p.e52613.

Frostegard, A., Vick, S.H., Lim, N.Y., Bakken, L.R. and Shapleigh, J.P., 2020. Linking meta-omics to the kinetics of denitrification intermediates reveals pH-dependent causes of N₂O emissions and nitrite accumulation in soil. *bioRxiv*.

Gaba, R.C., Elkhadragy, L., Boas, F.E., Chaki, S., Chen, H.H., El-Kebir, M., Garcia, K.D., Giurini, E.F., Guzman, G., LoBianco, F.V. and Neto, M.F., 2020. Development and comprehensive characterization of porcine hepatocellular carcinoma for translational liver cancer investigation. *Oncotarget*, 11(28), p.2686.

Garcia, G.R., Ribeiro, J.M.C., Maruyama, S.R., Gardinassi, L.G., Nelson, K., Ferreira, B.R., Andrade, T.G. and de Miranda Santos, I.K.F., 2020. A transcriptome and proteome of the tick *Rhipicephalus microplus* shaped by the genetic composition of its hosts and developmental stage. *Scientific reports*, 10(1), pp.1-23.

Gazy I, Miller CJ, Kim GY, Usdin K. CGG repeat expansion, and elevated Fmr1 transcription and mitochondrial copy number in a new Fragile X PM mouse embryonic stem cell model. *Frontiers in cell and developmental biology*. 2020 Jun 30;8:482.

Giacomini, D.A., Patterson, E.L., Küpper, A., Beffa, R., Gaines, T.A. and Tranel, P.J., 2020. Coexpression Clusters and Allele-Specific Expression in Metabolism-Based Herbicide Resistance. *Genome biology and evolution*, 12(12), pp.2267-2278.

Gilchrist, A.E. and Harley, B.A., 2020. Connecting secretome to hematopoietic stem cell phenotype shifts in an engineered bone marrow niche. *Integrative Biology*, 12(7), pp.175-187.

Giordano, R., Donthu, R.K., Zimin, A.V., Chavez, I.C.J., Gabaldon, T., van Munster, M., Hon, L., Hall, R., Badger, J.H., Nguyen, M. and Flores, A., 2020. Soybean aphid biotype 1 genome: Insights into the invasive biology and adaptive evolution of a major agricultural pest. *Insect biochemistry and molecular biology*, 120, p.103334.

Giovannoni, J.J., Feder, A., Jiao, C., Galpaz, N., Vrebalov, J.T., Xu, Y., Portnoy, V., Tzuri, G., Gonda, I., Burger, J. and Gur, A., 2020. Melon ethylene-mediated transcriptome and methylome dynamics provide insights to volatile production. *bioRxiv*.

Gonda, I., Faigenboim, A., Adler, C., Milavski, R., Karp, M.J., Shachter, A., Ronen, G., Baruch, K., Chaimovitsh, D. and Dudai, N., 2020. The genome sequence of tetraploid sweet basil, *Ocimum basilicum* L., provides tools for advanced genome editing and molecular breeding. *DNA Research*, 27(5), p.dsaa027.

Gray MA, Stanczak MA, Mantuano NR, Xiao H, Pijnenborg JF, Malaker SA, Miller CL, Weidenbacher PA, Tanco JT, Ahn G, Woods EC. Targeted glycan degradation potentiates the anticancer immune response in vivo. *Nature Chemical Biology*. 2020 Dec;16(12):1376-84.

Guo, W., Xin, M., Wang, Z., Yao, Y., Hu, Z., Song, W., Yu, K., Chen, Y., Wang, X., Guan, P. and Appels, R., 2020. Origin and adaptation to high altitude of Tibetan semi-wild wheat. *Nature communications*, 11(1), pp.1-12.

Gyarmati, P., Song, Y., Dotimas, J., Yoshioka, G. and Christison, A., 2020. Cross-sectional comparisons of gut microbiome and short-chain fatty acid levels among children with varied weight classifications. *Pediatric Obesity*, p.e12750.

Haber, M., Roth-Rosenberg, D., Lalzar, M., Burgsdorf, I., Saurav, K., Lionheart, R., Lehahn, Y., Aharonovich, D., Sher, D., Krom, M.D. and Steindler, L., 2020. Microbial communities in an ultra-oligotrophic sea are more affected by season than by distance from shore. *bioRxiv*.

Hahn, K.E., Dahms, I., Butt, C.M., Salem Jr, N., Grimshaw, V., Bailey, E., Fleming, S.A., Smith, B.N. and Dilger, R.N., 2020. Impact of Arachidonic and Docosahexaenoic Acid Supplementation on Neural and Immune Development in the Young Pig. *Frontiers in nutrition*, 7.

Han, Z., Sarkar, S. and Smith, A.M., 2020. Zwitterion and Oligo (ethylene glycol) Synergy Minimizes Nonspecific Binding of Compact Quantum Dots. *ACS nano*, 14(3), pp.3227-3241.

Hannon, B.A., Edwards, C.G., Thompson, S.V., Burke, S.K., Burd, N.A., Holscher, H.D., Teran-Garcia, M. and Khan, N.A., 2020. Genetic Variants in Lipid Metabolism Pathways Interact with Diet to Influence Blood Lipid Concentrations in Adults with Overweight and Obesity. *Lifestyle Genomics*, 13(6), pp.155-163.

Hannon, B.A., Edwards, C.G., Thompson, S.V., Reeser, G.E., Burd, N.A., Holscher, H.D., Teran-Garcia, M. and Khan, N.A., 2020. Single Nucleotide Polymorphisms Related to Lipoprotein Metabolism Are Associated with Blood Lipid Changes following Regular Avocado Intake in a Randomized Control Trial among Adults with Overweight and Obesity. *The Journal of nutrition*, 150(6), pp.1379-1387.

Hao, Q., Zong, X., Sun, Q., Lin, Y.C., Song, Y.J., Hashemikhbir, S., Hsu, R.Y., Kamran, M., Chaudhary, R., Tripathi, V. and Singh, D.K., 2020. The S-phase-induced lncRNA SUNO1 promotes cell proliferation by controlling YAP1/Hippo signaling pathway. *Elife*, 9, p.e55102.

Hatcher, K.M., Smith, R.L., Chiang, C., Li, Z., Flaws, J.A. and Mahoney, M.M., 2020. Association of phthalate exposure and endogenous hormones with self-reported sleep disruptions: results from the Midlife Women's Health Study. *Menopause*, 27(11), pp.1251-1264.

Hauber, M.E., Abolins-Abols, M., Kim, C.R. and Paitz, R.T., 2020. Inter-individual variation in anti-parasitic egg rejection behavior: a test of the maternal investment hypothesis. *Integrative Organismal Biology*, 2(1), p. obaa014.

Hayward, B.E., Steinbach, P.J. and Usdin, K., 2020. A point mutation in the nuclease domain of MLH3 eliminates repeat expansions in a mouse stem cell model of the Fragile X-related disorders. *Nucleic acids research*, 48(14), pp.7856-7863.

Herrera, S.V., Sweet, A.D., Allen, J.M., Walden, K.K., Weckstein, J.D. and Johnson, K.P., 2020. Extensive in situ radiation of feather lice on tinamous. *Proceedings. Biological sciences*, 287(1921), p.20193005.

Herschlag, R., Okada, R., Alcalá-Briseño, R.I., de Souto, E.R. and Valverde, R.A., 2020. Identification of a novel endornavirus in Geranium carolinianum and occurrence within three agroecosystems. *Virus Research*, 288, p.198116.

Herrig, D., Vertacnik, K., Kohrs, A. and Linnen, C., 2020. Support for the Adaptive Decoupling Hypothesis from Whole-Transcriptome Profiles of a Hypermetamorphic and Sexually Dimorphic Insect, *Neodiprion lecontei*. *Authorea Preprints*.

Hong, S., Zhang, X., Lake, R.J., Pawel, G.T., Guo, Z., Pei, R. and Lu, Y., 2020. A photo-regulated aptamer sensor for spatiotemporally controlled monitoring of ATP in the mitochondria of living cells. *Chemical Science*, 11(3), pp.713-720.

Hotaling, S., Shah, A.A., McGowan, K.L., Tronstad, L.M., Giersch, J.J., Finn, D.S., Woods, H.A., Dillon, M.E. and Kelley, J.L., 2020. Mountain stoneflies may tolerate warming streams: evidence from organismal physiology and gene expression. *Global Change Biology*, 26(10), pp.5524-5538.

Hou, J., Daniels, P.N. and Burke, M.D., 2020. Small Molecule Channels Harness Membrane Potential to Concentrate Potassium in *trk1Δtrk2Δ* Yeast. *ACS chemical biology*, 15(6), pp.1575-1580.

Hu, Liangyu, Yifei Chen, Ismael M. Cortes, Danielle N. Coleman, Hongyu Dai, Yusheng Liang, Claudia Parys, Carlos Fernandez, Mengzhi Wang, and Juan J. Loor. "Supply of methionine and arginine alters phosphorylation of mechanistic target of rapamycin (mTOR), circadian clock proteins, and α -s1-casein abundance in bovine mammary epithelial cells." *Food & function* 11, no. 1 (2020): 883-894.

Hu, Y. and Cronan, J.E., 2020. α -proteobacteria synthesize biotin precursor pimeloyl-ACP using BioZ 3-ketoacyl-ACP synthase and lysine catabolism. *Nature communications*, 11(1), pp.1-13.

Huang, G. and Docampo, R., 2020. The Mitochondrial Calcium Uniporter Interacts with Subunit c of the ATP Synthase of Trypanosomes and Humans. *MBio*, 11(2).

Huang, J.K., Samassekou, K., Alhmadi, H.B., VanDerway, D.R., Diaz, J.D., Seiver, J.A., McClenahan, S.W., Holt, S.M. and Wen, L., 2020. Knockout of secondary alcohol dehydrogenase in *Nocardia cholesterolicum* NRRL 5767 by CRISPR/Cas9 genome editing technology. *PloS one*, 15(3), p.e0230915.

Inx, D. and Harley, B.A.C., Inclusion of a 3D-printed Hyperelastic bone mesh improves mechanical and osteogenic performance of a mineralized collagen scaffold.

Johnson, D.B., Schideman, L.C., Canam, T., Hosen, J.D. and Hudson, R.J., 2020. Spatial and temporal differences in the composition and structure of bacterial assemblages in biofilms of a rotating algal-bacterial contactor system treating high-strength anaerobic digester filtrate. *Bioresource Technology Reports*, 10, p.100413.

Jones, S.I., Hunt, M.R. and Vodkin, L.O., 2020. An embryo lethal transgenic line manifests global expression changes and elevated protein/oil ratios in heterozygous soybean plants. *PloS one*, 15(6), p.e0233721.

Jones, B.M., Rao, V.D., Gernat, T., Jagla, T., Cash-Ahmed, A.C., Rubin, B.E., Comi, T.J., Bhogale, S., Husain, S.S., Blatti, C. and Middendorf, M., 2020. Individual differences in honey bee behavior enabled by plasticity in brain gene regulatory networks. *Elife*, 9, p.e62850.

Juvik, J.A. and Chatham, L.A., 2020. GWAS AND GENOMIC SELECTION FOR INCREASED ANTHOCYANIN CONTENT IN PURPLE CORN. *bioRxiv*.

Juvik, J.A. and Chatham, L.A., 2020. Linking Anthocyanin Diversity, Hue, And Genetics In Purple Corn. *bioRxiv*.

Kapheim, K.M., Jones, B.M., Pan, H., Li, C., Harpur, B.A., Kent, C.F., Zayed, A., Ioannidis, P., Waterhouse, R.M., Kingwell, C. and Stolle, E., 2020. Developmental plasticity shapes social traits and selection in a facultatively eusocial bee. *Proceedings of the National Academy of Sciences*, 117(24), pp.13615-13625.

Keever, M.R., Zhang, P., Bolt, C.R., Antonson, A.M., Rymut, H.E., Caputo, M.P., Houser, A.K., Hernandez, A.G., Southey, B.R., Rund, L.A. and Johnson, R.W., 2020. Lasting and sex-dependent impact of maternal immune activation on molecular pathways of the Amygdala. *Frontiers in Neuroscience*, 14, p.774.

Kenny, P.J., Kim, M., Skariah, G., Nielsen, J., Lannom, M.C. and Ceman, S., 2020. The FMRP–MOV10 complex: a translational regulatory switch modulated by G-Quadruplexes. *Nucleic acids research*, 48(2), pp.862-878.

Kim, J., Mei, R., Wilson, F.P., Yuan, H., Bocher, B.T. and Liu, W.T., 2020. Ecogenomics-Based Mass Balance Model Reveals the Effects of Fermentation Conditions on Microbial Activity. *Frontiers in microbiology*, 11, p.3115.

Kim, N., Zabaloy, M.C., Riggins, C.W., Rodríguez-Zas, S. and Villamil, M.B., 2020. Microbial Shifts Following Five Years of Cover Cropping and Tillage Practices in Fertile Agroecosystems. *Microorganisms*, 8(11), p.1773.

Konopka, C.J., Woźniak, M., Hedhli, J., Siekierzycka, A., Skokowski, J., Pęksa, R., Matuszewski, M., Munirathinam, G., Kajdacsy-Balla, A., Dobrucki, I.T. and Kalinowski, L., 2020. Quantitative imaging of the receptor for advanced glycation end-products in prostate cancer. *European journal of nuclear medicine and molecular imaging*, 47(11), pp.2562-2576.

Koth, M.L., Garcia-Moreno, S.A., Novak, A., Holthusen, K.A., Kothandapani, A., Jiang, K., Taketo, M.M., Nicol, B., Yao, H.H.C., Futtner, C.R. and Maatouk, D.M., 2020. Canonical Wnt/β-catenin activity and differential epigenetic marks direct sexually dimorphic regulation of Irx3 and Irx5 in developing mouse gonads. *Development*, 147(6).

Kraut-Cohen, J., Zolti, A., Shaltiel-Harpaz, L., Argaman, E., Rabinovich, R., Green, S.J. and Minz, D., 2020. Effects of tillage practices on soil microbiome and agricultural parameters. *Science of the Total Environment*, 705, p.135791.

Kuchan, M.J., Ranard, K.M., Dey, P., Jeon, S., Sasaki, G.Y., Schimpf, K.J., Bruno, R.S., Neuringer, M. and Erdman Jr, J.W., 2020. Infant rhesus macaque brain α-tocopherol stereoisomer profile is differentially impacted by the source of α-tocopherol in infant formula. *The Journal of nutrition*, 150(9), pp.2305-2313.

Le, P., Vaidya, R., Smith, L.D., Han, Z., Zahid, M.U., Winter, J., Sarkar, S., Chung, H.J., Perez-Pinera, P., Selvin, P.R. and Smith, A.M., 2020. Optimizing Quantum Dot Probe Size for Single-Receptor Imaging. *ACS nano*, 14(7), pp.8343-8358.

Lee, J., Molley, T.G., Seward, C.H., Abdeen, A.A., Zhang, H., Wang, X., Gandhi, H., Yang, J.L., Gaus, K. and Kilian, K.A., 2020. Geometric regulation of histone state directs melanoma reprogramming. *Communications biology*, 3(1), pp.1-9.

Lee-Thacker, S., Jeon, H., Choi, Y., Taniuchi, I., Takarada, T., Yoneda, Y., Ko, C. and Jo, M., 2020. Core Binding Factors are essential for ovulation, luteinization, and female fertility in mice. *Scientific reports*, 10(1), pp.1-17.

Lewis, C.G. and Beazley, M.J., 2020. Impacts of dibenzopyrenes on bacterial community isolated from Gulf of Mexico sediment. *MicrobiologyOpen*, 9(7), p.e1039.

Li, K., Grooms, G.M., Khan, S.M., Hernandez, A.G., Witola, W.H. and Stec, J., 2020. Novel acyl carbamates and acyl/diacyl ureas show in vitro efficacy against Toxoplasma gondii and Cryptosporidium parvum. *International Journal for Parasitology: Drugs and Drug Resistance*, 14, pp.80-90.

Li-Byarlay, H., Boncristiani, H., Howell, G., Herman, J., Clark, L., Strand, M.K., Tarpy, D. and Rueppell, O., 2020. Transcriptomic and epigenomic dynamics of honey bees in response to lethal viral infection. *Frontiers in genetics*, 11, p.1056.

Lim, C.K., Gapinske, M., Brooks, A.K., Woods, W.S., Powell, J.E., Winter, J., Perez-Pinera, P. and Gaj, T., 2020. Treatment of a mouse model of ALS by in vivo base editing. *Molecular Therapy*, 28(4), pp.1177-1189.

Liu, C.J., Schaettler, M., Blaha, D.T., Bowman-Kirigin, J.A., Kobayashi, D.K., Livingstone, A.J., Bender, D., Miller, C.A., Kranz, D.M., Johanns, T.M. and Dunn, G.P., 2020. Treatment of an aggressive orthotopic murine glioblastoma model with combination checkpoint blockade and a multivalent neoantigen vaccine. *Neuro-oncology*, 22(9), pp.1276-1288.

Liu, J., Yu, M., Chatnaparat, T., Lee, J.H., Tian, Y., Hu, B. and Zhao, Y., 2020. Comparative transcriptomic analysis of global gene expression mediated by (p) ppGpp reveals common regulatory networks in *Pseudomonas syringae*. *BMC genomics*, 21, pp.1-18.

Liu, M., Nobu, M.K., Ren, J., Jin, X., Hong, G. and Yao, H., 2020. Bacterial compositions in inhalable particulate matters from indoor and outdoor wastewater treatment processes. *Journal of hazardous materials*, 385, p.121515.

Liu, S., Zhang, Z., Abelson, J.R. and Girolami, G.S., 2020. Platinum ω -Alkenyl Compounds as Chemical Vapor Deposition Precursors. Mechanistic Studies of the Thermolysis of Pt [CH₂CMe₂CH₂CH=CH₂] 2 in Solution and the Origin of Rapid Nucleation. *Organometallics*, 39(21), pp.3817-3829.

Liu, S., Zhang, Z., Gray, D., Zhu, L., Abelson, J.R. and Girolami, G.S., 2020. Platinum ω -Alkenyl Compounds as Chemical Vapor Deposition Precursors: Synthesis and Characterization of Pt [CH₂CMe₂CH₂CH=CH₂] 2 and the Impact of Ligand Design on the Deposition Process. *Chemistry of Materials*, 32(21), pp.9316-9334.

Ly, L.K., Rowles III, J.L., Paul, H.M., Alves, J.M., Yemm, C., Wolf, P.M., Devendran, S., Hudson, M.E., Morris, D.J., Erdman Jr, J.W. and Ridlon, J.M., 2020. Bacterial steroid-17, 20-desmolase is a taxonomically rare enzymatic pathway that converts prednisone to 1, 4-androstane-3, 11, 17-trione, a metabolite that causes proliferation of prostate cancer cells. *The Journal of steroid biochemistry and molecular biology*, 199, p.105567.

Luzardo-Ocampo, I., Loarca-Piña, G. and de Mejia, E.G., 2020. Gallic and butyric acids modulated NLRP3 inflammasome markers in a co-culture model of intestinal inflammation. *Food and Chemical Toxicology*, 146, p.111835.

Ma, L., Xu, G.B., Tang, X., Zhang, C., Zhao, W., Wang, J. and Chen, H., 2020. Anti-cancer potential of polysaccharide extracted from hawthorn (*Crataegus*) on human colon cancer cell line HCT116 via cell cycle arrest and apoptosis. *Journal of Functional Foods*, 64, p.103677.

MacLaine, K.D., Stebbings, K.A., Llano, D.A. and Rhodes, J.S., 2020. Voluntary wheel running has no impact on brain and liver mitochondrial DNA copy number or mutation measures in the PolG mouse model of aging. *PloS one*, 15(3), p.e0226860.

Mao, Y., Zeineldin, M., Usmani, M., Uprety, S., Shisler, J.L., Jutla, A., Unnikrishnan, A. and Nguyen, T.H., Distribution and antibiotic resistance profiles of *Salmonella enterica* in rural areas of North Carolina after Hurricane Florence in 2018. *GeoHealth*, p.e2020GH000294.

Martin, B.E., Harris, J.D., Sun, J., Koelle, K. and Brooke, C.B., 2020. Cellular co-infection can modulate the efficiency of influenza A virus production and shape the interferon response. *PLoS pathogens*, 16(10), p.e1008974.

Martin-Ryals, A.D., Schideman, L.C. and Ong, M., 2020. Utilizing bioaugmentation to improve performance of a two-phase AnMBR treating sewage sludge. *Environmental technology*, 41(10), pp.1322-1336.

Martinů, J., Štefka, J., Poosakkannu, A. and Hypša, V., 2020. “Parasite turnover zone” at secondary contact: A new pattern in host–parasite population genetics. *Molecular Ecology*, 29(23), pp.4653-4664.

Martinů, J., Štefka, J., Poosakkannu, A. and Hypša, V., 2020. Host “cleansing zone” at secondary contact: a new pattern in host-parasite population genetics. *BioRxiv*.

Mathur, B., Arif, W., Patton, M.E., Faiyaz, R., Liu, J., Yeh, J., Harpavat, S., Schoonjans, K., Kalsotra, A., Wheatley, A.M. and Anakk, S., 2020. Transcriptomic analysis across liver diseases reveals disease-modulating activation of constitutive androstan receptor in cholestasis. *JHEP Reports*, 2(5), p.100140.

Mazewski, C., Luna-Vital, D., Berhow, M. and Gonzalez de Mejia, E., 2020. Reduction of colitis-associated colon carcinogenesis by a black lentil water extract through inhibition of inflammatory and immunomodulatory cytokines. *Carcinogenesis*, 41(6), pp.790-803.

McClain, S.M., Ojoawo, A.M., Lin, W., Rienstra, C.M. and Murphy, C.J., 2020. Interaction of Alpha-Synuclein and Its Mutants with Rigid Lipid Vesicle Mimics of Varying Surface Curvature. *ACS nano*, 14(8), pp.10153-10167.

McCoy, A.M., Kemper, A.M., Boyce, M.K., Brown, M.P. and Trumble, T.N., 2020. Differential gene expression analysis reveals pathways important in early post-traumatic osteoarthritis in an equine model. *BMC genomics*, 21(1), pp.1-12.

McGhee, K.E., Paitz, R.T., Baker, J.A., Foster, S.A. and Bell, A.M., 2020. Effects of predation risk on egg steroid profiles across multiple populations of threespine stickleback. *Scientific reports*, 10(1), pp.1-14.

McShan, A., Devlin, C., Morozov, G., Overall, S., Moschidi, D., Akella, N., Prockto, E. and Sgourakis, N., 2020. TAPBPR Promotes Antigen Loading on MHC-I Molecules Using a Peptide Trap.

Mei, R., Nobu, M.K. and Liu, W.T., 2020. Identifying anaerobic amino acids degraders through the comparison of short-term and long-term enrichments. *Environmental microbiology reports*, 12(2), pp.173-184.

Menarim, B.C., Gillis, K.H., Oliver, A., Mason, C., Werre, S.R., Luo, X., Byron, C.R., Kalbfleisch, T.S., MacLeod, J.N. and Dahlgren, L.A., 2020. Inflamed synovial fluid induces a homeostatic response in bone marrow mononuclear cells in vitro: Implications for joint therapy. *The FASEB Journal*, 34(3), pp.4430-4444.

Metras, B.N., Holle, M.J., Parker, V.J., Miller, M.J. and Swanson, K.S., 2020. Assessment of commercial companion animal kefir products for label accuracy of microbial composition and quantity. *Journal of animal science*, 98(9), p.skaa301.

Miller, A.N., Yoon, A., Gulden, G., Stensholt, Ø., Van Vooren, N., Ohenoja, E. and Methven, A.S., 2020. Studies in Gyromitra I: the Gyromitra gigas species complex. *Mycological Progress*, 19(12), pp.1459-1473.

Miller, C.A., Holm, H.C., Horstmann, L., George, J.C., Fredricks, H.F., Van Mooy, B.A. and Apprill, A., 2020. Coordinated transformation of the gut microbiome and lipidome of bowhead whales provides novel insights into digestion. *The ISME journal*, 14(3), pp.688-701.

Miraeiz, E., Chaiprom, U., Afsharifar, A., Karegar, A., Drnevich, J.M. and Hudson, M.E., 2020. Early transcriptional responses to soybean cyst nematode HG Type 0 show genetic differences among resistant and susceptible soybeans. *Theoretical and Applied Genetics*, 133(1), pp.87-102.

Misra, C., Bangru, S., Lin, F., Lam, K., Koenig, S.N., Lubbers, E.R., Hedhli, J., Murphy, N.P., Parker, D.J., Dobrucki, L.W. and Cooper, T.A., 2020. Aberrant Expression of a Non-muscle RBFOX2 Isoform Triggers Cardiac Conduction Defects in Myotonic Dystrophy. *Developmental cell*, 52(6), pp.748-763.

Mitros, T., Session, A.M., James, B.T., Wu, G.A., Belaffif, M.B., Clark, L.V., Shu, S., Dong, H., Barling, A., Holmes, J.R. and Mattick, J.E., 2020. Genome biology of the paleotetraploid perennial biomass crop Miscanthus. *Nature communications*, 11(1), pp.1-11.

Mogren, C.L., Benítez, M.S., McCarter, K., Boyer, F. and Lundgren, J.G., 2020. Diverging landscape impacts on macronutrient status despite overlapping diets in managed (*Apis mellifera*) and native (*Melissodes desponsa*) bees. *Conservation physiology*, 8(1), p.coaa109.

Montgomery, T.L., Künstner, A., Kennedy, J.J., Fang, Q., Asarian, L., Culp-Hill, R., D'Alessandro, A., Teuscher, C., Busch, H. and Krementsov, D.N., 2020. Interactions between host genetics and gut microbiota determine susceptibility to CNS autoimmunity. *Proceedings of the National Academy of Sciences*, 117(44), pp.27516-27527.

Motika, S.E., Ulrich, R.J., Geddes, E.J., Lee, H.Y., Lau, G.W. and Hergenrother, P.J., 2020. Gram-negative antibiotic active through inhibition of an essential riboswitch. *Journal of the American Chemical Society*, 142(24), pp.10856-10862.

Munroe, M., Mahmassi, Z.S., Dvoretskiy, S., Reid, J.J., Miller, B.F., Hamilton, K., Rhodes, J.S. and Boppart, M.D., 2020. Cognitive function is preserved in aged mice following long-term β -hydroxy β -methylbutyrate supplementation. *Nutritional neuroscience*, 23(3), pp.170-182.

Nandula, V.K., Giacomini, D.A., Lawrence, B.H., Molin, W.T. and Bond, J.A., 2020. Resistance to clethodim in Italian ryegrass (*Lolium perenne* ssp. *multiflorum*) from Mississippi and North Carolina. *Pest management science*, 76(4), pp.1378-1385.

Nandula, V.K., Giacomini, D.A. and Molin, W.T., 2020. Target Site-Based Resistance to ALS Inhibitors, Glyphosate, and PPO Inhibitors in an *Amaranthus palmeri* Accession from Mississippi. *American Journal of Plant Sciences*, 11(8), pp.1206-1216.

Nandula, V.K., Giacomini, D.A. and Ray, J.D., 2020. Resistance to acetolactate synthase inhibitors is due to a W 574 to L amino acid substitution in the ALS gene of redroot pigweed and tall waterhemp. *Plos one*, 15(6), p.e0235394.

Napier, J.D., Fernandez, M.C., de Lafontaine, G. and Hu, F.S., 2020. Ice-age persistence and genetic isolation of the disjunct distribution of larch in Alaska. *Ecology and evolution*, 10(3), pp.1692-1702.

Narapareddy, L., Wildman, D.E., Armstrong, D.L., Weckle, A., Bell, A.F., Patil, C.L., Tardif, S.D., Ross, C.N. and Rutherford, J.N., 2020. Maternal weight affects placental DNA methylation of genes involved in metabolic pathways in the common marmoset monkey (*Callithrix jacchus*). *American journal of primatology*, 82(3), p.e23101.

Nayak, D.D., Liu, A., Agrawal, N., Rodriguez-Carreiro, R., Dong, S.H., Mitchell, D.A., Nair, S.K. and Metcalf, W.W., 2020. Functional interactions between posttranslationally modified amino acids of methyl-coenzyme M reductase in *Methanosarcina acetivorans*. *PLoS biology*, 18(2), p.e3000507.

Nobu, M.K., Narihiro, T., Mei, R., Kamagata, Y., Lee, P.K., Lee, P.H., McInerney, M.J. and Liu, W.T., 2020. Catabolism and interactions of uncultured organisms shaped by eco-thermodynamics in methanogenic bioprocesses. *Microbiome*, 8(1), pp.1-16.

Oba, P.M., Holscher, H.D., Mathai, R.A., Kim, J. and Swanson, K.S., 2020. Diet Influences the Oral Microbiota of Infants during the First Six Months of Life. *Nutrients*, 12(11), p.3400.

O'Flaherty, S., Foley, M.H., Rivera, A.J., Theriot, C.M. and Barrangou, R., 2020. Complete Genome Sequence of *Lactobacillus johnsonii* NCK2677, Isolated from Mice. *Microbiology Resource Announcements*, 9(43).

Olatoye, M.O., Clark, L.V., Labonte, N.R., Dong, H., Dwiyanti, M.S., Anzoua, K.G., Brummer, J.E., Ghimire, B.K., Dzyubenko, E., Dzyubenko, N. and Bagmet, L., 2020. Training Population Optimization for Genomic Selection in Miscanthus. *G3: Genes, Genomes, Genetics*, 10(7), pp.2465-2476.

Oh, S.H., Isenhower, A., Rodriguez-Bobadilla, R., Smith, B., Jones, J., Hubka, V., Fields, C., Hernandez, A. and Hoyer, L.L., 2020. Pursuing Advances in DNA Sequencing Technology to Solve a Complex Genomic Jigsaw Puzzle: The Agglutinin-Like Sequence (ALS) Genes of *Candida tropicalis*. *Frontiers in microbiology*, 11.

Orton, L.M., Fitzek, E., Feng, X., Grayburn, W.S., Mower, J.P., Liu, K., Zhang, C., Duvall, M.R. and Yin, Y., 2020. *Zygnema circumcarinatum* UTEX 1559 chloroplast and mitochondrial genomes provide insight into land plant evolution. *Journal of experimental botany*, 71(11), pp.3361-3373.

Oswald, J.A., Allen, J.M., LeFebvre, M.J., Stucky, B.J., Folk, R.A., Albury, N.A., Morgan, G.S., Guralnick, R.P. and Steadman, D.W., 2020. Ancient DNA and high-resolution chronometry reveal a long-term human role in the historical diversity and biogeography of the Bahamian hutia. *Scientific reports*, 10(1), pp.1-10.

Ouyang, C., Zhang, S., Xue, C., Yu, X., Xu, H., Wang, Z., Lu, Y. and Wu, Z.S., 2020. Precision-guided missile-Like DNA nanostructure containing warhead and guidance control for aptamer-based targeted drug delivery into cancer cells in vitro and in vivo. *Journal of the American Chemical Society*, 142(3), pp.1265-1277.

Pagan-Diaz, G.J., Drnevich, J., Ramos-Cruz, K.P., Sam, R., Sengupta, P. and Bashir, R., 2020. Modulating electrophysiology of motor neural networks via optogenetic stimulation during neurogenesis and synaptogenesis. *Scientific reports*, 10(1), pp.1-16.

Pan, M., Hidalgo-Cantabrana, C., Goh, Y.J., Sanozky-Dawes, R. and Barrangou, R., 2020. Comparative analysis of lactobacillus gasseri and lactobacillus crispatus isolated from human urogenital and gastrointestinal tracts. *Frontiers in microbiology*, 10, p.3146.

Pantha, P., Chalivendra, S., Oh, D.H., Elderd, B. and Dassanayake, M., 2020. A tale of two transcriptomic responses in agricultural pests via host defenses and viral replication. *bioRxiv*.

Pantham, P., Armstrong, D.L., Bodnariuc, J., Haupt, O., Johnson, A.W., Underhill, L., Iozzo, R.V., Lechner, B.E. and Wildman, D.E., 2020. Transcriptomic profiling of fetal membranes of mice deficient in biglycan and decorin as a model of preterm birth. *Biology of reproduction*.

Park, C.J., Lin, P.C., Zhou, S., Barakat, R., Bashir, S.T., Choi, J.M., Cacioppo, J.A., Oakley, O.R., Duffy, D.M., Lydon, J.P. and Ko, C.J., 2020. Progesterone receptor serves the ovary as a trigger of ovulation and a terminator of inflammation. *Cell reports*, 31(2), p.107496.

Park, J., Gill, K.S., Aghajani, A.A., Heredia, J.D., Choi, H., Oberstein, A. and Procko, E., 2020. Engineered receptors for human cytomegalovirus that are orthogonal to normal human biology. *PLoS pathogens*, 16(6), p.e1008647.

Parker, E.N., Drown, B.S., Geddes, E.J., Lee, H.Y., Ismail, N., Lau, G.W. and Hergenrother, P.J., 2020. Implementation of permeation rules leads to a FabI inhibitor with activity against Gram-negative pathogens. *Nature microbiology*, 5(1), pp.67-75.

Parks, K.S., Janzen, D.H., Hallwachs, W., Fernández-Triana, J., Dyer, L.A., Rodriguez, J.J., Arias-Penna, D.C. and Whitfield, J.B., 2020. A five-gene molecular phylogeny reveals Parapanteles Ashmead (Hymenoptera: Braconidae) to be polyphyletic as currently composed. *Molecular Phylogenetics and Evolution*, 150, p.106859.

Pastrana-Otero, I., Majumdar, S., Gilchrist, A.E., Gorman, B.L., Harley, B.A. and Kraft, M.L., 2020. Development of an inexpensive Raman-compatible substrate for the construction of a microarray screening platform. *Analyst*, 145(21), pp.7030-7039.

Parvathaneni, R.K., Kumar, I., Braud, M. and Eveland, A.L., 2020. Regulatory signatures of drought response in stress resilient Sorghum bicolor. bioRxiv.

Patil, H.J., Gatica, J., Zolti, A., Benet-Perelberg, A., Naor, A., Dror, B., Al Ashhab, A., Marman, S., Hasan, N.A., Colwell, R.R. and Sher, D., 2020. Temporal Resistome and Microbial Community Dynamics in an Intensive Aquaculture Facility with Prophylactic Antimicrobial Treatment. *Microorganisms*, 8(12), p.1984.

Penin, A.A., Kasianov, A.S., Klepikova, A.V., Kirov, I.V., Gerasimov, E.S., Fesenko, A.N. and Logacheva, M.D., 2020. High-resolution transcriptome atlas and improved genome assembly of common buckwheat, *Fagopyrum esculentum*. bioRxiv.

Perlmutter, S.J., Geddes, E.J., Drown, B.S., Motika, S.E., Lee, M.R. and Hergenrother, P.J., 2020. Compound Uptake into *E. coli* Can Be Facilitated by N-Alkyl Guanidiniums and Pyridiniums. *ACS infectious diseases*, 7(1), pp.162-173.

Perrin-Stowe, T.I., Ishida, Y., Terrill, E.E., Hamlin, B.C., Penfold, L., Cusack, L.M., Novakofski, J., Mateus-Pinilla, N.E. and Roca, A.L., 2020. Prion protein gene (PRNP) sequences suggest differing vulnerability to chronic wasting disease for Florida Key deer (*Odocoileus virginianus clavium*) and Columbian white-tailed deer (*O. v. leucurus*). *Journal of Heredity*, 111(6), pp.564-572.

Price-Christenson, G.J., Johnston, M.R., Herrick, B.M. and Yannarell, A.C., 2020. Influence of invasive earthworms (*Amyntas* spp.) on Wisconsin forest soil microbial communities and soil chemistry. *Soil Biology and Biochemistry*, 149, p.107955.

Piras, I.S., Bleul, C., Siniard, A., Wolfe, A.J., De Both, M.D., Hernandez, A.G. and Huentelman, M.J., 2020. Association of common genetic variants in the CPSF7 and SDHAF2 genes with Canine Idiopathic Pulmonary Fibrosis in the West Highland White Terrier. *Genes*, 11(6), p.609.

Qin, E.C., Ahmed, S.T., Sehgal, P., Vu, V.H., Kong, H. and Leckband, D.E., 2020. Comparative effects of N-cadherin protein and peptide fragments on mesenchymal stem cell mechanotransduction and paracrine function. *Biomaterials*, 239, p.119846.

Rahman, I.R., Acedo, J.Z., Liu, X.R., Zhu, L., Arrington, J., Gross, M.L. and van der Donk, W.A., 2020. Substrate Recognition by the Class II Lanthipeptide Synthetase HalM2. *ACS chemical biology*, 15(6), pp.1473-1486.

Ramayo-Caldas, Y., Prenafeta-Boldú, F., Zingaretti, L.M., Gonzalez-Rodriguez, O., Dalmau, A., Quintanilla, R. and Ballester, M., 2020. Gut eukaryotic communities in pigs: diversity, composition and host genetics contribution. *Animal Microbiome*, 2, pp.1-12.

Ramayo-Caldas, Y., Zingaretti, L., Popova, M., Estellé, J., Bernard, A., Pons, N., Bellot, P., Mach, N., Rau, A., Roume, H. and Perez-Enciso, M., 2020. Identification of rumen microbial biomarkers linked to methane emission in Holstein dairy cows. *Journal of Animal Breeding and Genetics*, 137(1), pp.49-59.

Ranard, K.M., Kuchan, M.J., Bruno, R.S., Juraska, J.M. and Erdman, J.W., 2020. Synthetic α-tocopherol, compared with natural α-tocopherol, downregulates myelin genes in cerebella of adolescent Ttpa-null mice. *The Journal of nutrition*, 150(5), pp.1031-1040.

Rashid, F., Ramakrishnan, A., Fields, C. and Irudayaraj, J., 2020. Acute PFOA exposure promotes epigenomic alterations in mouse kidney tissues. *Toxicology reports*, 7, pp.125-132.

Ravet, K., Sparks, C., Dixon, A., Küpper, A., Westra, E., Pettinga, D., Tranel, P., Felix, J., Morishita, D., Jha, P. and Kniss, A., 2020. Genomic-based epidemiology reveals gene flow and independent origins of glyphosate resistance in *Bassia scoparia* populations across North America. *Authorea Preprints*.

Ray, T., Shah, A., Bulla, G.A. and Ray, P.S., 2020. Gatekeeper transcription factors regulate switch between lineage preservation and cell plasticity. *bioRxiv*.

Réblová, M., Nekvindová, J., Fournier, J. and Miller, A.N., 2020. Delimitation, new species and teleomorph-anamorph relationships in Codinaea, Dendrophoma, Paragaeumannomyces and Striatosphaeria (Chaetosphaeriaceae). *MycoKeys*, 74, p.17.

Regmi, B., Douglas, M.R., Edds, D.R., Wangchuk, K., Lu, C., Khanal, G.P., Norbu, P., Norbu, S., Dorji, S., Tshering, S. and Angel, Z., 2020. The Himalayan Uplift and the Evolution of Aquatic Biodiversity Across Asia: Snowtrout (Cyprininae: Schizothorax) as a Test Case. *bioRxiv*.

Rêgo, A., Chaturvedi, S., Springer, A., Lish, A.M., Barton, C.L., Kapheim, K.M., Messina, F.J. and Gompert, Z., 2020. Combining experimental evolution and genomics to understand how seed beetles adapt to a marginal host plant. *Genes*, 11(4), p.400.

Revord, R.S., Lovell, S.T., Brown, P., Capik, J. and Molnar, T.J., 2020. Using genotyping-by-sequencing derived SNPs to examine the genetic structure and identify a core set of *Corylus americana* germplasm. *Tree Genetics & Genomes*, 16(5), pp.1-11.

Rhodes, J.S., Rendeiro, C., Mun, J.G., Du, K., Thaman, P., Snyder, A., Pinardo, H., Drnevich, J., Chandrasekaran, S., Lai, C.S. and Schimpf, K.J., 2020. Brain α-tocopherol concentration and stereoisomer profile alter hippocampal gene expression in weanling mice. *The Journal of Nutrition*, 150(12), pp.3075-3085.

Ridlon, J.M., Devendran, S., Alves, J.M., Doden, H., Wolf, P.G., Pereira, G.V., Ly, L., Volland, A., Takei, H., Nittono, H. and Murai, T., 2020. The 'in vivo lifestyle' of bile acid 7 α -dehydroxylating bacteria: comparative genomics, metatranscriptomic, and bile acid metabolomics analysis of a defined microbial community in gnotobiotic mice. *Gut microbes*, 11(3), pp.381-404.

Rowland, E.F., Bautista, M.A., Zhang, C. and Whitaker, R.J., 2020. Surface resistance to SSVs and SIRVs in pilin deletions of *Sulfolobus islandicus*. *Molecular microbiology*, 113(4), pp.718-727.

Saha, A., Seward, C.H., Stubbs, L. and Mizzen, C.A., 2020. Site-specific phosphorylation of histone H1. 4 is associated with transcription activation. *International journal of molecular sciences*, 21(22), p.8861.

Salvador, A.F., Askow, A.T., McKenna, C.F., Fang, H.Y., Burke, S.K., Li, Z., Ulanov, A.V., Paluska, S.A., Petruzzello, S.J., Boppart, M.D. and Oliver, J.M., 2020. Resistance Exercise-induced Regulation of Muscle Protein Synthesis to Intra-set Rest. *Medicine and science in sports and exercise*, 52(5), pp.1022-1030.

Schmidt, J.E., Rodrigues, J.L.M., Brisson, V.L., Kent, A. and Gaudin, A.C., 2020. Impacts of directed evolution and soil management legacy on the maize rhizobiome. *Soil Biology and Biochemistry*, 145, p.107794.

Schwartz-Duval, A.S., Konopka, C.J., Moitra, P., Daza, E.A., Srivastava, I., Johnson, E.V., Kampert, T.L., Fayn, S., Haran, A., Dobrucki, L.W. and Pan, D., 2020. Intratumoral generation of photothermal gold nanoparticles through a vectorized biomimetic mineralization of ionic gold. *Nature communications*, 11(1), pp.1-18.

Shao, T., Ireland, F.A., McCann, J.C. and Shike, D.W., 2020. Effects of supplements differing in fatty acid profile to late gestational beef cows on cow performance, calf growth performance, and gene expression.

Sharma, A.K., Petrzelkova, K., Pafco, B., Robinson, C.A.J., Fuh, T., Wilson, B.A., Stumpf, R.M., Torralba, M.G., Blekhman, R., White, B. and Nelson, K.E., 2020. Traditional human populations and nonhuman primates show parallel gut microbiome adaptations to analogous ecological conditions. *Msystems*, 5(6).

Sher, Y., Olm, M.R., Raveh-Sadka, T., Brown, C.T., Sher, R., Firek, B., Baker, R., Morowitz, M.J. and Banfield, J.F., 2020. Combined analysis of microbial metagenomic and metatranscriptomic sequencing data to assess *in situ* physiological conditions in the premature infant gut. *Plos one*, 15(3), p.e0229537.

Sherer, N.A. and Kuhlman, T.E., 2020. Escherichia coli with a Tunable Point Mutation Rate for Evolution Experiments. *G3: Genes, Genomes, Genetics*, 10(8), pp.2671-2681.

Shpigler, H.Y., Herb, B., Drnevich, J., Band, M., Robinson, G.E. and Bloch, G., 2020. The evolution of extreme fertility defied ancestral gonadotropin mediated brain-reproduction tradeoff. *bioRxiv*.

Skinner, R.K., Dietrich, C.H., Walden, K.K., Gordon, E., Sweet, A.D., Podsiadlowski, L., Petersen, M., Simon, C., Takiya, D.M. and Johnson, K.P., 2020. Phylogenomics of Auchenorrhyncha (Insecta: Hemiptera) using transcriptomes: examining controversial relationships via degeneracy coding and interrogation of gene conflict. *Systematic Entomology*, 45(1), pp.85-113.

Smith, B.N., Fleming, S.A., Wang, M. and Dilger, R.N., 2020. Alterations of fecal microbiome characteristics by dietary soy isoflavone ingestion in growing pigs infected with porcine reproductive and respiratory syndrome virus. *Journal of animal science*, 98(6), p.skaa156.

Smith, B.N., Hannas, M., Orso, C., Martins, S.M., Wang, M., Donovan, S.M. and Dilger, R.N., 2020. Dietary osteopontin-enriched algal protein as nutritional support in weaned pigs infected with F18-fimbriated enterotoxigenic Escherichia coli. *Journal of animal science*, 98(10), p.skaa314.

Smith, B.N., Oelschlager, M.L., Abdul Rasheed, M.S. and Dilger, R.N., 2020. Dietary soy isoflavones reduce pathogen-related mortality in growing pigs under porcine reproductive and respiratory syndrome viral challenge. *Journal of animal science*, 98(2), p.skaa024.

Smith, L.D., Liu, Y., Zahid, M.U., Canady, T.D., Wang, L., Kohli, M., Cunningham, B.T. and Smith, A.M., 2020. High-fidelity single molecule quantification in a flow cytometer using multiparametric optical analysis. *ACS nano*, 14(2), pp.2324-2335.

Srour, A.Y., Ammar, H.A., Subedi, A., Pimentel, M., Cook, R.L., Bond, J. and Fakhoury, A.M., 2020. Microbial communities associated with long-term tillage and fertility treatments in a corn-soybean cropping system. *Frontiers in microbiology*, 11, p.1363.

Srivastava, I., Khan, M.S., Dighe, K., Alafeef, M., Wang, Z., Banerjee, T., Ghonge, T., Grove, L.M., Bashir, R. and Pan, D., 2020. On-Chip Electrical Monitoring of Real-Time “Soft” and “Hard” Protein Corona Formation on Carbon Nanoparticles. *Small Methods*, 4(7), p.2000099.

Stack, T.M., Morrison, K.N., Dettmer, T.M., Wille, B., Kim, C., Joyce, R., Jermain, M., Naing, Y.T., Bhatti, K., Francisco, B.S. and Carter, M.S., 2020. Characterization of an L-ascorbate catabolic pathway with unprecedented enzymatic transformations. *Journal of the American Chemical Society*, 142(4), pp.1657-1661.

Strom, S.A., Hager, A.G., Seiter, N.J., Davis, A.S. and Riechers, D.E., 2020. Metabolic resistance to S-metolachlor in two waterhemp (*Amaranthus tuberculatus*) populations from Illinois, USA. *Pest management science*, 76(9), pp.3139-3148.

- Sweet, A.D., Johnson, K.P. and Cameron, S.L., 2020. Mitochondrial genomes of Columbicola feather lice are highly fragmented, indicating repeated evolution of minicircle-type genomes in parasitic lice. *PeerJ*, 8, p.e8759.
- Sweet, A.D., Wilson, R.E., Sonsthagen, S.A. and Johnson, K.P., 2020. Lousy grouse: Comparing evolutionary patterns in Alaska galliform lice to understand host evolution and host-parasite interactions. *Ecology and evolution*, 10(15), pp.8379-8393.
- Stewart, J.L., Stella, S., Cunha, L.L., Dias, N.W., Canisso, I.F., Mercadante, V.R., Cardoso, R.C., Williams, G.L., Pohler, K.G. and Lima, F.S., 2020. Administration of nerve growth factor- β to heifers with a pre-ovulatory follicle enhanced luteal formation and function and promoted LH release. *Theriogenology*, 148, pp.37-47.
- Sonam, S., Bangru, S., Perry, K.J., Kalsotra, A. and Henry, J.J., 2020. Single-cell analyses of the corneal epithelium: Unique cell types and gene expression profiles. *bioRxiv*.
- Stone, C.M., Zuo, Z., Li, B., Ruiz, M., Swanson, J., Hunt, J., Kim, C.H. and Smith, R.L., 2020. Spatial, Temporal, and Genetic Invasion Dynamics of *Aedes albopictus* (Diptera: Culicidae) in Illinois. *Journal of medical entomology*, 57(5), pp.1488-1500.
- Sun, Q., Hao, Q., Lin, Y.C., Song, Y.J., Bangru, S., Arif, W., Tripathi, V., Zhang, Y., Cho, J.H., Freier, S.M. and Jenkins, L.M., 2020. Antagonism between splicing and microprocessor complex dictates the serum-induced processing of Inc-MIRHG for efficient cell cycle reentry. *RNA*, 26(11), pp.1603-1620.
- Sun, J., Vera, J.C., Drnevich, J., Lin, Y.T., Ke, R. and Brooke, C.B., 2020. Single cell heterogeneity in influenza A virus gene expression shapes the innate antiviral response to infection. *PLoS pathogens*, 16(7), p.e1008671.
- Tabatabaei, S.K., Wang, B., Athreya, N.B.M., Enghiad, B., Hernandez, A.G., Fields, C.J., Leburton, J.P., Soloveichik, D., Zhao, H. and Milenkovic, O., 2020. DNA punch cards for storing data on native DNA sequences via enzymatic nicking. *Nature communications*, 11(1), pp.1-10.
- Taylor, A.M., Thompson, S.V., Edwards, C.G., Musaad, S.M., Khan, N.A. and Holscher, H.D., 2020. Associations among diet, the gastrointestinal microbiota, and negative emotional states in adults. *Nutritional neuroscience*, 23(12), pp.983-992.
- Tang, B., Guo, Z.S., Bartlett, D.L., Yan, D.Z., Schane, C.P., Thomas, D.L., Liu, J., McFadden, G., Shisler, J.L. and Roy, E.J., 2020. Synergistic combination of oncolytic virotherapy and immunotherapy for glioma. *Clinical Cancer Research*, 26(9), pp.2216-2230.

Tao, L., Pattenade, S.A., Joshi, S., Begley, T.P., Rauchfuss, T.B. and Britt, R.D., 2020. Radical SAM enzyme HydE generates adenosylated Fe (i) intermediates en route to the [FeFe]-hydrogenase catalytic H-cluster. *Journal of the American Chemical Society*, 142(24), pp.10841-10848.

Thekke-Veetil, T., Lagos-Kutz, D., McCoppin, N.K., Hartman, G.L., Ju, H.K., Lim, H.S. and Domier, L., 2020. Soybean Thrips (Thysanoptera: Thripidae) Harbor Highly Diverse Populations of Arthropod, Fungal and Plant Viruses. *Viruses*, 12(12), p.1376.

Tiffany, A.S., Dewey, M.J. and Harley, B.A., 2020. Sequential sequestrations increase the incorporation and retention of multiple growth factors in mineralized collagen scaffolds. *RSC Advances*, 10(45), pp.26982-26996.

Vallejo, R., Kelley, C.A., Gupta, A., Smith, W.J., Vallejo, A. and Cedeño, D.L., 2020. Modulation of neuroglial interactions using differential target multiplexed spinal cord stimulation in an animal model of neuropathic pain. *Molecular pain*, 16, p.1744806920918057.

Van Der Meulen, K.L., Vöcking, O., Weaver, M.L., Meshram, N.N. and Famulski, J.K., 2020. Spatiotemporal characterization of anterior segment mesenchyme heterogeneity during zebrafish ocular anterior segment development. *Frontiers in Cell and Developmental Biology*, 8, p.379.

van Oers, K., Sepers, B., Sies, W., Gawehtns, F., Verhoeven, K.J. and Laine, V.N., 2020. Epigenetics of animal personality: DNA methylation cannot explain the heritability of exploratory behavior in a songbird. *Integrative and comparative biology*, 60(6), pp.1517-1530.

Virrueta Herrera, S., Sweet, A.D., Allen, J.M., Walden, K.K., Weckstein, J.D. and Johnson, K.P., 2020. Extensive *in situ* radiation of feather lice on tinamous. *Proceedings of the Royal Society B*, 287(1921), p.20193005.

Wang, G., DiTusa, S.F., Oh, D.H., Herrmann, A.D., Mendoza-Cozatl, D.G., O'Neill, M.A., Smith, A.P. and Dassanayake, M., 2020. Cross species multi-omics reveals cell wall sequestration and elevated global transcription as mechanisms of boron tolerance in plants. *bioRxiv*.

Wang, J., Koganti, P.P. and Yao, J., 2020. Systematic identification of long intergenic non-coding RNAs expressed in bovine oocytes. *Reproductive Biology and Endocrinology*, 18(1), pp.1-9.

Wang, Y., Berhow, M.A., Black, M. and Jeffery, E.H., 2020. A comparison of the absorption and metabolism of the major quercetin in brassica, quercetin-3-O-sophoroside, to that of quercetin aglycone, in rats. *Food chemistry*, 311, p.125880.

- Wang, Y. and Brieher, W.M., 2020. CD2AP links actin to PI3 kinase activity to extend epithelial cell height and constrain cell area. *Journal of Cell Biology*, 219(1).
- Wang, Z., Neupane, A., Vo, R., White, J., Wang, X. and Marzano, S.Y.L., 2020. Comparing Gut Microbiome in Mothers' Own Breast Milk-and Formula-Fed Moderate-Late Preterm Infants. *Frontiers in Microbiology*, 11, p.891.
- Weber, L., González-Díaz, P., Armenteros, M., Ferrer, V.M., Bretos, F., Bartels, E., Santoro, A.E. and Apprill, A., 2020. Microbial signatures of protected and impacted Northern Caribbean reefs: changes from Cuba to the Florida Keys. *Environmental microbiology*, 22(1), pp.499-519.
- Wise, B.R., Roane, T.M. and Mosier, A.C., 2020. Community composition of nitrite reductase gene sequences in an acid mine drainage environment. *Microbial ecology*, 79(3), pp.562-575.
- Wisser, R., Oppenheim, S.J., Ernest, E.G., Mhora, T.T., Scanlan, C., Dumas, M.D., Gregory, N.F., Evans, T.A. and Donofrio, N., 2020. Genome assembly of a Mesoamerica-derived *Phaseolus lunatus* cultivar enables the identification and comparative genomic analysis of a complex resistance locus. *bioRxiv*.
- Worku, M., Asiamah, E.K., Vailati-Riboni, M., Loor, J.J. and Kang, H.W., 2020. SUPPLEMENTAL METHIONINE, CHOLINE, OR TAURINE AFFECT GALECTIN GENE EXPRESSION IN ADULT HOLSTEIN COW AND NEONATAL HOLSTEIN CALF NEUTROPHILS IN VITRO. *Journal of microbiology, biotechnology and food sciences*, 10(1), pp.87-92.
- Xiang, Y., Miller, A.N., McGrath, M. and Babadoost, M., 2020. Genotyping-by-sequencing for analysis of the genetic variation of *Podosphaera xanthii*, incitant of cucurbit powdery mildew. *Plant disease*, 104(3), pp.951-957.
- Xing, Y., Wu, S. and Men, Y., 2020. Exposure to Environmental Levels of Pesticides Stimulates and Diversifies Evolution in *Escherichia coli* toward Higher Antibiotic Resistance. *Environmental science & technology*, 54(14), pp.8770-8778.
- Xue, P., Si, T., Mishra, S., Zhang, L., Choe, K., Sweedler, J.V. and Zhao, H., 2020. A mass spectrometry-based high-throughput screening method for engineering fatty acid synthases with improved production of medium-chain fatty acids. *Biotechnology and bioengineering*, 117(7), pp.2131-2138.
- Yadav, A.K., Reinhardt, C.J., Arango, A.S., Huff, H.C., Dong, L., Malkowski, M.G., Das, A., Tajkhorshid, E. and Chan, J., 2020. An Activity-Based Sensing Approach for the Detection of Cyclooxygenase-2 in Live Cells. *Angewandte Chemie*, 132(8), pp.3333-3340.

- Yang, H.W., Yu, M., Lee, J.H., Chatnaparat, T. and Zhao, Y., 2020. The stringent response regulator (p) ppGpp mediates virulence gene expression and survival in *Erwinia amylovora*. *BMC genomics*, 21, pp.1-19.
- Yang, L., Si, B., Zhang, Y., Watson, J., Stablein, M., Chen, J., Zhang, Y., Zhou, X. and Chu, H., 2020. Continuous treatment of hydrothermal liquefaction wastewater in an anaerobic biofilm reactor: potential role of granular activated carbon. *Journal of Cleaner Production*, 276, p.122836.
- Yang, X.D., Li, W., Zhang, S., Wu, D., Jiang, X., Tan, R., Niu, X., Wang, Q., Wu, X., Liu, Z. and Chen, L.F., 2020. PLK 4 deubiquitination by Spata2-CYLD suppresses NEK7-mediated NLRP3 inflammasome activation at the centrosome. *The EMBO journal*, 39(2), p.e102201.
- Yao, L., Witt, K., Li, H., Rice, J., Salinas, N.R., Martin, R.D., Huerta-Sánchez, E. and Malhi, R.S., 2020. Population genetics of wild *Macaca fascicularis* with low-coverage shotgun sequencing of museum specimens. *American journal of physical anthropology*, 173(1), pp.21-33.
- Yu, Y., Guo, Y., Tian, Q., Lan, Y., Yeh, H., Zhang, M., Tasan, I., Jain, S. and Zhao, H., 2020. An efficient gene knock-in strategy using 5'-modified double-stranded DNA donors with short homology arms. *Nature chemical biology*, 16(4), pp.387-390.
- Yu, Y., Zhang, K., Li, Z., Ren, C., Chen, J., Lin, Y.H., Liu, J. and Men, Y., 2020. Microbial Cleavage of C–F Bonds in Two C6 Per-and Polyfluorinated Compounds via Reductive Defluorination. *Environmental science & technology*, 54(22), pp.14393-14402.
- Zabala, G., Kour, A. and Vodkin, L.O., 2020. Overexpression of an ethylene-forming ACC oxidase (ACO) gene precedes the Minute Hilum seed coat phenotype in *Glycine max*. *BMC genomics*, 21(1), pp.1-20.
- Zhang, L., Chichlowski, M., Gross, G., Holle, M.J., Lbarra-Sánchez, L.A., Wang, S. and Miller, M.J., 2020. Milk fat globule membrane protects *Lactobacillus rhamnosus* GG from bile stress by regulating exopolysaccharide production and biofilm formation. *Journal of agricultural and food chemistry*, 68(24), pp.6646-6655.
- Zeineldin, M., Lowe, J. and Aldridge, B., 2020. Effects of tilmicosin treatment on the nasopharyngeal microbiota of feedlot cattle with respiratory disease during the first week of clinical recovery. *Frontiers in veterinary science*, 7, p.115.
- Zeng, F., Pires-Alves, M., Hawk, C.W., Chen, X. and Jin, H., 2020. Molecular functions of conserved developmentally-regulated GTP-binding protein Drg1 in translation. *bioRxiv*.

Zhang, L., Zhang, Y., Chen, Y., Gholamalamdari, O., Wang, Y., Ma, J. and Belmont, A.S., 2020. TSA-Seq reveals a largely “hardwired” genome organization relative to nuclear speckles with small position changes tightly correlated with gene expression changes. *BioRxiv*, p.824433.

Zhao, B., Chaturvedi, P., Zimmerman, D.L. and Belmont, A.S., 2020. Efficient and Reproducible Multigene Expression after Single-Step Transfection Using Improved BAC Transgenesis and Engineering Toolkit. *ACS synthetic biology*, 9(5), pp.1100-1116.

Zhou, W., VanDuyne, P., Zhang, C., Riessen, R., Barragan, M., Rowitz, B.M., Teran-Garcia, M., Boppart, S.A. and Anakk, S., 2020. Bile acid excess impairs thermogenic function in brown adipose tissue. *bioRxiv*.

Zomer, H.D. and Reddi, P.P., 2020. Mouse Sertoli cells isolation by lineage tracing and sorting. *Molecular reproduction and development*, 87(8), pp.871-879.