

Washington University in St. Louis

Washington University Open Scholarship

Biology Department Bibliographies

Biology

9-9-2024

Biology Department Publications: 2018

Sam Lindgren

Washington University in St. Louis, lindgrens@wustl.edu

Follow this and additional works at: https://openscholarship.wustl.edu/bio_biblio



Part of the [Biology Commons](#)

Recommended Citation

Lindgren, Sam, "Biology Department Publications: 2018" (2024). *Biology Department Bibliographies*. 19. https://openscholarship.wustl.edu/bio_biblio/19

This Bibliography is brought to you for free and open access by the Biology at Washington University Open Scholarship. It has been accepted for inclusion in Biology Department Bibliographies by an authorized administrator of Washington University Open Scholarship. For more information, please contact digital@wumail.wustl.edu.

Biology Department Publications: 2018

- Allodi, M. A., Otto, J. P., Sohail, S. H., Saer, R. G., Wood, R. E., Rolczynski, B. S., Massey, S. C., Ting, P.-C., Blankenship, R. E., & Engel, G. S. (2018). Redox conditions affect ultrafast exciton transport in photosynthetic pigment-protein complexes. *The Journal of Physical Chemistry Letters*, 9(1), 89–95. <https://doi.org/10.1021/acs.jpcllett.7b02883>
- Arp, J., Götze, S., Mukherji, R., Mattern, D. J., García-Altare, M., Klapper, M., Brock, D. A., Brakhage, A. A., Strassmann, J. E., Queller, D. C., Bardl, B., Willing, K., Peschel, G., & Stallforth, P. (2018). Synergistic activity of cosecreted natural products from amoebae-associated bacteria. *Proceedings of the National Academy of Sciences of the United States of America*, 115(15), 3758–3763. <https://doi.org/10.1073/pnas.1721790115>
- Augustine, R. C. (2018). Live and let die: Phosphatidic acid modulates the self-incompatibility response. *The Plant Cell*, 30(5), 950. <https://doi.org/10.1105/tpc.18.00370>
- Augustine, R. C., & Vierstra, R. D. (2018). SUMOylation: Re-wiring the plant nucleus during stress and development. *Current Opinion in Plant Biology*, 45(Pt A), 143–154. <https://doi.org/10.1016/j.pbi.2018.06.006>
- Bar-Zvi, S., Lahav, A., Harris, D., Niedzwiedzki, D. M., Blankenship, R. E., & Adir, N. (2018). Structural heterogeneity leads to functional homogeneity in *A. marina* phycocyanin. *Biochimica Et Biophysica Acta. Bioenergetics*, 1859(7), 544–553. <https://doi.org/10.1016/j.bbabi.2018.04.007>
- Ben-Shahar, Y. (2018). The impact of environmental mn exposure on insect biology. *Frontiers in Genetics*, 9, 70. <https://doi.org/10.3389/fgene.2018.00070>

2 Biology Department Publications: 2018

Berdahl, A. M., Kao, A. B., Flack, A., Westley, P. A. H., Codling, E. A., Couzin, I. D., Dell, A.

I., & Biro, D. (2018). Collective animal navigation and migratory culture: From theoretical models to empirical evidence. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 373(1746), 20170009.

<https://doi.org/10.1098/rstb.2017.0009>

Blankenship, R. E., Brune, D. C., & Olson, J. C. (2018). Remembering John M. Olson (1929-

2017). *Photosynthesis Research*, 137(2), 161–169. <https://doi.org/10.1007/s11120-018-0489-9>

Bonebrake, T. C., Brown, C. J., Bell, J. D., Blanchard, J. L., Chauvenet, A., Champion, C., Chen,

I.-C., Clark, T. D., Colwell, R. K., Danielsen, F., Dell, A. I., Donelson, J. M., Evengård, B., Ferrier, S., Frusher, S., Garcia, R. A., Griffis, R. B., Hobday, A. J., Jarzyna, M. A., ...

Pecl, G. T. (2018). Managing consequences of climate-driven species redistribution requires integration of ecology, conservation and social science. *Biological Reviews of the Cambridge Philosophical Society*, 93(1), 284–305. <https://doi.org/10.1111/brv.12344>

Brock, J. R., Dönmez, A. A., Beilstein, M. A., & Olsen, K. M. (2018). Phylogenetics of *Camelina*

crantz. (Brassicaceae) and insights on the origin of gold-of-pleasure (*Camelina sativa*). *Molecular Phylogenetics and Evolution*, 127, 834–842.

<https://doi.org/10.1016/j.ympev.2018.06.031>

Burger, J. R., & Fristoe, T. S. (2018). Hunter-gatherer populations inform modern ecology.

Proceedings of the National Academy of Sciences of the United States of America, 115(6), 1137–1139. <https://doi.org/10.1073/pnas.1721726115>

Campbell-Staton, S. C., Bare, A., Losos, J. B., Edwards, S. V., & Cheviron, Z. A. (2018).

Physiological and regulatory underpinnings of geographic variation in reptilian cold

3 Biology Department Publications: 2018

tolerance across a latitudinal cline. *Molecular Ecology*, 27(9), 2243–2255.

<https://doi.org/10.1111/mec.14580>

Carmona-Alcocer, V., Abel, J. H., Sun, T. C., Petzold, L. R., Doyle, F. J., Simms, C. L., & Herzog, E. D. (2018). Ontogeny of circadian rhythms and synchrony in the suprachiasmatic nucleus. *The Journal of Neuroscience*, 38(6), 1326–1334.

<https://doi.org/10.1523/JNEUROSCI.2006-17.2017>

Cascella, B., & Jez, J. M. (2018). Beyond the teaching assistantship: CURE leadership as a training platform for future faculty. *Journal of Chemical Education*, 95(1), 3–6.

<https://doi.org/10.1021/acs.jchemed.7b00705>

Chalker, D. L. (2018). Transgenerational inheritance: Parental guidance suggested. *Current Biology*, 28(12), R702–R704. <https://doi.org/10.1016/j.cub.2018.05.041>

Chen, H.-Y. S., Bandyopadhyay, A., & Pakrasi, H. B. (2018). Function, regulation and distribution of IsiA, a membrane-bound chlorophyll a-antenna protein in cyanobacteria. *Photosynthetica*, 56(1), 322–333. <https://doi.org/10.1007/s11099-018-0787-7>

Cloyed, C. S., Eason, P. K., & Dell, A. I. (2018). The thermal dependence of carbon stable isotope incorporation and trophic discrimination in the domestic cricket, *Acheta domesticus*. *Journal of Insect Physiology*, 107, 34–40.

<https://doi.org/10.1016/j.jinsphys.2018.02.003>

Dixit, R., & Petry, S. (2018). The life of a microtubule. *Molecular Biology of the Cell*, 29(6), 689. <https://doi.org/10.1091/mbc.E17-11-0677>

Donihue, C. M., Herrel, A., Fabre, A.-C., Kamath, A., Geneva, A. J., Schoener, T. W., Kolbe, J. J., & Losos, J. B. (2018). Hurricane-induced selection on the morphology of an island lizard. *Nature*, 560(7716), 88–91. <https://doi.org/10.1038/s41586-018-0352-3>

4 Biology Department Publications: 2018

- Dufour, C. M. S., Herrel, A., & Losos, J. B. (2018). The effect of recent competition between the native *Anolis oculatus* and the invasive *A. cristatellus* on display behavior. *PeerJ*, 6, e4888. <https://doi.org/10.7717/peerj.4888>
- Fan, Y., Burkart, G. M., & Dixit, R. (2018). The Arabidopsis SPIRAL2 protein targets and stabilizes microtubule minus ends. *Current Biology*, 28(6), 987-994.e3. <https://doi.org/10.1016/j.cub.2018.02.014>
- Frick, E. M., & Strader, L. C. (2018a). Kinase MPK17 and the peroxisome division factor PMD1 influence salt-induced peroxisome proliferation. *Plant Physiology*, 176(1), 340–351. <https://doi.org/10.1104/pp.17.01019>
- Frick, E. M., & Strader, L. C. (2018b). Roles for IBA-derived auxin in plant development. *Journal of Experimental Botany*, 69(2), 169–177. <https://doi.org/10.1093/jxb/erx298>
- Frick, E. M., & Strader, L. C. (2018c). They can handle the stress: MPK17 and PMD1 act in a salt-specific pathway. *Plant Signaling & Behavior*, 13(2), e1428518. <https://doi.org/10.1080/15592324.2018.1428518>
- Ganguly, A., DeMott, L., Zhu, C., McClosky, D. D., Anderson, C. T., & Dixit, R. (2018). Importin- β directly regulates the motor activity and turnover of a Kinesin-4. *Developmental Cell*, 44(5), 642-651.e5. <https://doi.org/10.1016/j.devcel.2018.01.027>
- Gopalakrishnan, S., Pakrasi, H. B., & Maranas, C. D. (2018). Elucidation of photoautotrophic carbon flux topology in *Synechocystis* PCC 6803 using genome-scale carbon mapping models. *Metabolic Engineering*, 47, 190–199. <https://doi.org/10.1016/j.ymben.2018.03.008>
- Greenbaum, G., Renan, S., Templeton, A. R., Bouskila, A., Saltz, D., Rubenstein, D. I., & Bar-David, S. (2018). Revealing life-history traits by contrasting genetic estimations with

predictions of effective population size. *Conservation Biology*, 32(4), 817–827.

<https://doi.org/10.1111/cobi.13068>

Guo, J., Wilken, S., Jimenez, V., Choi, C. J., Ansong, C., Dannebaum, R., Sudek, L., Milner, D. S., Bachy, C., Reistetter, E. N., Elrod, V. A., Klimov, D., Purvine, S. O., Wei, C.-L., Kunde-Ramamoorthy, G., Richards, T. A., Goodenough, U., Smith, R. D., Callister, S. J., & Worden, A. Z. (2018). Specialized proteomic responses and an ancient photoprotection mechanism sustain marine green algal growth during phosphate limitation. *Nature Microbiology*, 3(7), 781–790. <https://doi.org/10.1038/s41564-018-0178-7>

Hanson, A. D., & Jez, J. M. (2018). Synthetic biology meets plant metabolism. *Plant Science*, 273, 1–2. <https://doi.org/10.1016/j.plantsci.2018.04.004>

Haynsen, M. S., Vatanparast, M., Mahadwar, G., Zhu, D., Moger-Reischer, R. Z., Doyle, J. J., Crandall, K. A., & Egan, A. N. (2018). De novo transcriptome assembly of *Pueraria montana* var. *Lobata* and *Neustanthus phaseoloides* for the development of eSSR and SNP markers: Narrowing the US origin(s) of the invasive kudzu. *BMC Genomics*, 19(1), 439. <https://doi.org/10.1186/s12864-018-4798-3>

Hernández-Prieto, M. A., Li, Y., Postier, B. L., Blankenship, R. E., & Chen, M. (2018). Far-red light promotes biofilm formation in the cyanobacterium *Acaryochloris marina*. *Environmental Microbiology*, 20(2), 535–545. <https://doi.org/10.1111/1462-2920.13961>

Hill, N. S., Zuke, J. D., Buske, P. J., Chien, A.-C., & Levin, P. A. (2018). A nutrient-dependent division antagonist is regulated post-translationally by the Clp proteases in *Bacillus subtilis*. *BMC Microbiology*, 18(1), 29. <https://doi.org/10.1186/s12866-018-1155-2>

6 Biology Department Publications: 2018

Holland, C. K., Berkovich, D. A., Kohn, M. L., Maeda, H., & Jez, J. M. (2018). Structural basis for substrate recognition and inhibition of prephenate aminotransferase from *Arabidopsis*.

The Plant Journal, 94(2), 304–314. <https://doi.org/10.1111/tpj.13856>

Holland, C. K., & Jez, J. M. (2018a). *Arabidopsis*: The original plant chassis organism. *Plant*

Cell Reports, 37(10), 1359–1366. <https://doi.org/10.1007/s00299-018-2286-5>

Holland, C. K., & Jez, J. M. (2018b). Reaction mechanism of prephenate dehydrogenase from the alternative tyrosine biosynthesis pathway in plants. *ChemBioChem*.

<https://doi.org/10.1002/cbic.201800085>

Hovanes, K. A., Harms, K. E., Gagnon, P. R., Myers, J. A., & Elderd, B. D. (2018).

Overdispersed spatial patterning of dominant bunchgrasses in southeastern pine savannas.

The American Naturalist, 191(5), 658–667. <https://doi.org/10.1086/696834>

Inglis, R. F., Asikhia, O., Ryu, E., Queller, D. C., & Strassmann, J. E. (2018). Predator-by-environment interactions mediate bacterial competition in the *Dictyostelium discoideum* microbiome. *Frontiers in Microbiology*, 9, 781.

<https://doi.org/10.3389/fmicb.2018.00781>

Jez, J. M. (2018). Introduction to the thematic minireview series: Green biological chemistry.

The Journal of Biological Chemistry, 293(14), 5016–5017.

<https://doi.org/10.1074/jbc.TM118.002424>

Kamath, A., & Losos, J. (2018a). Reconsidering territoriality is necessary for understanding

Anolis mating systems. *Behavioral Ecology and Sociobiology*, 72(7), 106.

<https://doi.org/10.1007/s00265-018-2524-4>

- Kamath, A., & Losos, J. B. (2018b). Estimating encounter rates as the first step of sexual selection in the lizard *Anolis sagrei*. *Proceedings. Biological Sciences*, 285(1873), 20172244. <https://doi.org/10.1098/rspb.2017.2244>
- Kavanagh, P. H., Vilela, B., Haynie, H. J., Tuff, T., Lima-Ribeiro, M., Gray, R. D., Botero, C. A., & Gavin, M. C. (2018). Hindcasting global population densities reveals forces enabling the origin of agriculture. *Nature Human Behaviour*, 2(7), 478–484. <https://doi.org/10.1038/s41562-018-0358-8>
- Keedy, H. E., Thomas, E. N., & Zaher, H. S. (2018). Decoding on the ribosome depends on the structure of the mRNA phosphodiester backbone. *Proceedings of the National Academy of Sciences of the United States of America*, 115(29), E6731–E6740. <https://doi.org/10.1073/pnas.1721431115>
- Khmelnitskiy, A., Kell, A., Reinot, T., Saer, R. G., Blankenship, R. E., & Jankowiak, R. (2018a). Corrigendum to “Energy landscape of the intact and destabilized FMO antennas from *C. tepidum* and the L122Q mutant: Low temperature spectroscopy and modeling study” [Biochim. Biophys. Acta Bioenerg. 1859 (2018) 165-173]. *Biochimica Et Biophysica Acta. Bioenergetics*, 1859(5), 409. <https://doi.org/10.1016/j.bbabbio.2018.02.003>
- Khmelnitskiy, A., Kell, A., Reinot, T., Saer, R. G., Blankenship, R. E., & Jankowiak, R. (2018b). Energy landscape of the intact and destabilized FMO antennas from *C. tepidum* and the L122Q mutant: Low temperature spectroscopy and modeling study. *Biochimica Et Biophysica Acta. Bioenergetics*, 1859(3), 165–173. <https://doi.org/10.1016/j.bbabbio.2017.11.008>
- Khmelnitskiy, A., Saer, R. G., Blankenship, R. E., & Jankowiak, R. (2018). Excitonic energy landscape of the Y16F mutant of the chlorobium *tepidum* Fenna-Matthews-Olson (FMO)

- complex: High resolution spectroscopic and modeling studies. *The Journal of Physical Chemistry B*, 122(14), 3734–3743. <https://doi.org/10.1021/acs.jpcc.7b11763>
- Knoot, C. J., Ungerer, J., Wangikar, P. P., & Pakrasi, H. B. (2018). Cyanobacteria: Promising biocatalysts for sustainable chemical production. *The Journal of Biological Chemistry*, 293(14), 5044–5052. <https://doi.org/10.1074/jbc.R117.815886>
- Koltz, A. M., Classen, A. T., & Wright, J. P. (2018). Warming reverses top-down effects of predators on belowground ecosystem function in Arctic tundra. *Proceedings of the National Academy of Sciences of the United States of America*, 115(32), E7541–E7549. <https://doi.org/10.1073/pnas.1808754115>
- Koltz, A. M., Schmidt, N. M., & Høye, T. T. (2018). Differential arthropod responses to warming are altering the structure of Arctic communities. *Royal Society Open Science*, 5(4), 171503. <https://doi.org/10.1098/rsos.171503>
- Krishnan, H. B., & Jez, J. M. (2018). Review: The promise and limits for enhancing sulfur-containing amino acid content of soybean seed. *Plant Science*, 272, 14–21. <https://doi.org/10.1016/j.plantsci.2018.03.030>
- Krishnan, H. B., Song, B., Oehrle, N. W., Cameron, J. C., & Jez, J. M. (2018). Impact of overexpression of cytosolic isoform of O-acetylserine sulphydrylase on soybean nodulation and nodule metabolome. *Scientific Reports*, 8(1), 2367. <https://doi.org/10.1038/s41598-018-20919-8>
- Kunkel, B. N., & Harper, C. P. (2018). The roles of auxin during interactions between bacterial plant pathogens and their hosts. *Journal of Experimental Botany*, 69(2), 245–254. <https://doi.org/10.1093/jxb/erx447>

9 Biology Department Publications: 2018

- LaManna, J. A., Mangan, S. A., Alonso, A., Bourg, N. A., Brockelman, W. Y., Bunyavejchewin, S., Chang, L.-W., Chiang, J.-M., Chuyong, G. B., Clay, K., Cordell, S., Davies, S. J., Furniss, T. J., Giardina, C. P., Gunatilleke, I. A. U. N., Gunatilleke, C. V. S., He, F., Howe, R. W., Hubbell, S. P., ... Myers, J. A. (2018). Response to comment on “Plant diversity increases with the strength of negative density dependence at the global scale.” *Science*, 360(6391), eaar3824. <https://doi.org/10.1126/science.aar3824>
- Lang, D., Ullrich, K. K., Murat, F., Fuchs, J., Jenkins, J., Haas, F. B., Piednoel, M., Gundlach, H., Van Bel, M., Meyberg, R., Vives, C., Morata, J., Symeonidi, A., Hiss, M., Muchero, W., Kamisugi, Y., Saleh, O., Blanc, G., Decker, E. L., ... Rensing, S. A. (2018). The *Physcomitrella patens* chromosome-scale assembly reveals moss genome structure and evolution. *The Plant Journal*, 93(3), 515–533. <https://doi.org/10.1111/tpj.13801>
- Lapiedra, O., Schoener, T. W., Leal, M., Losos, J. B., & Kolbe, J. J. (2018). Predator-driven natural selection on risk-taking behavior in anole lizards. *Science*, 360(6392), 1017–1020. <https://doi.org/10.1126/science.aap9289>
- Leung, W., & Elgin, S. C. R. (2018). Response to the letter to the editor by Dunning Hotopp and Klasson. *Genes, Genomes, Genetics*, 8(1), 375. <https://doi.org/10.1534/g3.117.300379>
- Liu, D., Liberton, M., Yu, J., Pakrasi, H. B., & Bhattacharyya-Pakrasi, M. (2018). Engineering nitrogen fixation activity in an oxygenic phototroph. *mBio*, 9(3), e01029-18. <https://doi.org/10.1128/mBio.01029-18>
- Liu, D., & Pakrasi, H. B. (2018). Exploring native genetic elements as plug-in tools for synthetic biology in the cyanobacterium *Synechocystis* sp. PCC 6803. *Microbial Cell Factories*, 17(1), 48. <https://doi.org/10.1186/s12934-018-0897-8>

10 Biology Department Publications: 2018

- Liu, F., Hu, W., & Vierstra, R. D. (2018). The vacuolar protein sorting-38 subunit of the arabidopsis phosphatidylinositol-3-kinase complex plays critical roles in autophagy, endosome sorting, and gravitropism. *Frontiers in Plant Science*, *9*, 781.
<https://doi.org/10.3389/fpls.2018.00781>
- Liu, H., Lu, Y., Wolf, B., Saer, R., King, J. D., & Blankenship, R. E. (2018). Photoactivation and relaxation studies on the cyanobacterial orange carotenoid protein in the presence of copper ion. *Photosynthesis Research*, *135*(1–3), 143–147.
<https://doi.org/10.1007/s11120-017-0363-1>
- Lu, Y., Goodson, C., Blankenship, R. E., & Gross, M. L. (2018). Primary and higher order structure of the reaction center from the purple phototrophic bacterium *Blastochloris viridis*: A test for native mass spectrometry. *Journal of Proteome Research*, *17*(4), 1615–1623. <https://doi.org/10.1021/acs.jproteome.7b00897>
- Lutz, J. A., Furniss, T. J., Johnson, D. J., Davies, S. J., Allen, D., Alonso, A., Anderson-Teixeira, K. J., Andrade, A., Baltzer, J., Becker, K. M. L., Blomdahl, E. M., Bourg, N. A., Bunyavejchewin, S., Burslem, D. F. R. P., Cansler, C. A., Cao, K., Cao, M., Cárdenas, D., Chang, L.-W., ... Zimmerman, J. K. (2018). Global importance of large-diameter trees. *Global Ecology and Biogeography*, *27*(7), 849–864.
<https://doi.org/10.1111/geb.12747>
- Magdaong, N. C. M., & Blankenship, R. E. (2018). Photoprotective, excited-state quenching mechanisms in diverse photosynthetic organisms. *The Journal of Biological Chemistry*, *293*(14), 5018–5025. <https://doi.org/10.1074/jbc.TM117.000233>
- Maiuri, M., Ostroumov, E. E., Saer, R. G., Blankenship, R. E., & Scholes, G. D. (2018). Coherent wavepackets in the Fenna-Matthews-Olson complex are robust to excitonic-

11 Biology Department Publications: 2018

structure perturbations caused by mutagenesis. *Nature Chemistry*, 10(2), 177–183.

<https://doi.org/10.1038/nchem.2910>

Majee, M., Kumar, S., Kathare, P. K., Wu, S., Gingerich, D., Nayak, N. R., Salaita, L., Dinkins, R., Martin, K., Goodin, M., Dirk, L. M. A., Lloyd, T. D., Zhu, L., Chappell, J., Hunt, A. G., Vierstra, R., Huq, E., & Downie, A. B. (2018). Kelch F-box protein positively influences Arabidopsis seed germination by targeting phytochrome-integrating factor1.

Proceedings of the National Academy of Sciences of the United States of America, 115(17), E4120–E4129. <https://doi.org/10.1073/pnas.1711919115>

Maksaev, G., Shoots, J. M., Ohri, S., & Haswell, E. S. (2018). Nonpolar residues in the presumptive pore-lining helix of mechanosensitive channel MSL10 influence channel behavior and establish a nonconducting function. *Plant Direct*, 2(6), e00059.

<https://doi.org/10.1002/pld3.59>

Marshall, R. S., & Vierstra, R. D. (2018). Autophagy: The master of bulk and selective recycling. *Annual Review of Plant Biology*, 69, 173–208.

<https://doi.org/10.1146/annurev-arplant-042817-040606>

Mazuski, C., Abel, J. H., Chen, S. P., Hermanstyne, T. O., Jones, J. R., Simon, T., Doyle, F. J., & Herzog, E. D. (2018). Entrainment of circadian rhythms depends on firing rates and neuropeptide release of VIP SCN neurons. *Neuron*, 99(3), 555-563.e5.

<https://doi.org/10.1016/j.neuron.2018.06.029>

McCarthy, R., Martin-Fairey, C., Sojka, D. K., Herzog, E. D., Jungheim, E. S., Stout, M. J., Fay, J. C., Mahendroo, M., Reese, J., Herington, J. L., Plosa, E. J., Shelton, E. L., & England, S. K. (2018). Mouse models of preterm birth: Suggested assessment and reporting

12 Biology Department Publications: 2018

guidelines. *Biology of Reproduction*, 99(5), 922–937.

<https://doi.org/10.1093/biolre/joy109>

McClerklin, S. A., Lee, S. G., Harper, C. P., Nwumeh, R., Jez, J. M., & Kunkel, B. N. (2018).

Indole-3-acetaldehyde dehydrogenase-dependent auxin synthesis contributes to virulence of *Pseudomonas syringae* strain DC3000. *PLoS Pathogens*, 14(1), e1006811.

<https://doi.org/10.1371/journal.ppat.1006811>

Muñoz, M. M., & Losos, J. B. (2018). Thermoregulatory behavior simultaneously promotes and forestalls evolution in a tropical lizard. *The American Naturalist*, 191(1), E15–E26.

<https://doi.org/10.1086/694779>

Nebenführ, A., & Dixit, R. (2018). Kinesins and myosins: Molecular motors that coordinate cellular functions in plants. *Annual Review of Plant Biology*, 69, 329–361.

<https://doi.org/10.1146/annurev-arplant-042817-040024>

Niedzwiedzki, D. M., & Blankenship, R. E. (2018). Excited-state properties of the central-cis isomer of the carotenoid peridinin. *Archives of Biochemistry and Biophysics*, 649, 29–36.

<https://doi.org/10.1016/j.abb.2018.05.004>

Niedzwiedzki, D. M., Gardiner, A. T., Blankenship, R. E., & Cogdell, R. J. (2018). Energy transfer in purple bacterial photosynthetic units from cells grown in various light intensities. *Photosynthesis Research*, 137(3), 389–402. <https://doi.org/10.1007/s11120-018-0512-1>

<https://doi.org/10.1007/s11120-018-0512-1>

Noh, S., Geist, K. S., Tian, X., Strassmann, J. E., & Queller, D. C. (2018). Genetic signatures of microbial altruism and cheating in social amoebas in the wild. *Proceedings of the National Academy of Sciences of the United States of America*, 115(12), 3096–3101.

<https://doi.org/10.1073/pnas.1720324115>

13 Biology Department Publications: 2018

Ogren, J. I., Tong, A. L., Gordon, S. C., Chenu, A., Lu, Y., Blankenship, R. E., Cao, J., &

Schlau-Cohen, G. S. (2018). Impact of the lipid bilayer on energy transfer kinetics in the photosynthetic protein LH2. *Chemical Science*, 9(12), 3095–3104.

<https://doi.org/10.1039/c7sc04814a>

Olsen, K. M., & Li, L.-F. (2018). Rooting for new sources of natural rubber. *National Science Review*, 5(1), 89. <https://doi.org/10.1093/nsr/nwx101c>

Olsen, K. M., & Small, L. L. (2018). Micro- and macroevolutionary adaptation through repeated loss of a complete metabolic pathway. *The New Phytologist*, 219(2), 757–766.

<https://doi.org/10.1111/nph.15184>

Pant, B., Park, M., Ojha, G. P., Park, J., Kuk, Y.-S., Lee, E.-J., Kim, H.-Y., & Park, S.-J. (2018).

Carbon nanofibers wrapped with zinc oxide nano-flakes as promising electrode material for supercapacitors. *Journal of Colloid and Interface Science*, 522, 40–47.

<https://doi.org/10.1016/j.jcis.2018.03.055>

Perroud, P.-F., Haas, F. B., Hiss, M., Ullrich, K. K., Alboresi, A., Amirebrahimi, M., Barry, K., Bassi, R., Bonhomme, S., Chen, H., Coates, J. C., Fujita, T., Guyon-Debast, A., Lang, D., Lin, J., Lipzen, A., Nogué, F., Oliver, M. J., Ponce de León, I., ... Rensing, S. A. (2018).

The *Physcomitrella patens* gene atlas project: Large-scale RNA-seq based expression data. *The Plant Journal*, 95(1), 168–182. <https://doi.org/10.1111/tpj.13940>

Pezaro, N., Rovelli, V., Segev, O., Templeton, A. R., & Blaustein, L. (2018). Suspected rat

predation on the Near Eastern Fire Salamander (*Salamandra infraimmaculata*) by selective consumption of non-toxic tissue. *Zoology in the Middle East*, 64(1), 91–93.

<https://doi.org/10.1080/09397140.2017.1375199>

14 Biology Department Publications: 2018

- Qi, Y., D'Alessandro, J. M., & Blodgett, J. A. V. (2018). Draft genome sequence of *Streptomyces* sp. Strain JV178, a producer of clifednamide-type polycyclic tetramate macrolactams. *Genome Announcements*, 6(1), e01401-17.
<https://doi.org/10.1128/genomeA.01401-17>
- Qi, Y., Ding, E., & Blodgett, J. A. V. (2018). Native and engineered clifednamide biosynthesis in multiple streptomyces spp. *ACS Synthetic Biology*, 7(2), 357–362.
<https://doi.org/10.1021/acssynbio.7b00349>
- Queller, D. C. (2018). Nancy A. Moran: Recipient of the 2017 molecular ecology prize. *Molecular Ecology*, 27(1), 35–37. <https://doi.org/10.1111/mec.14447>
- Ramirez, K. S., Berhe, A. A., Burt, J., Gil-Romera, G., Johnson, R. F., Koltz, A. M., Lacher, I., McGlynn, T., Nielsen, K. J., Schmidt, R., Simonis, J. L., terHorst, C. P., & Tuff, K. (2018). The future of ecology is collaborative, inclusive and deconstructs biases. *Nature Ecology & Evolution*, 2(2), 200. <https://doi.org/10.1038/s41559-017-0445-7>
- Renan, S., Speyer, E., Ben-Nun, T., Ziv, A., Greenbaum, G., Templeton, A. R., Bar-David, S., & Bouskila, A. (2018). Fission-fusion social structure of a reintroduced ungulate: Implications for conservation. *Biological Conservation*, 222, 261–267.
<https://doi.org/10.1016/j.biocon.2018.04.013>
- Rengasamy, K., Ranaivoarisoa, T., Singh, R., & Bose, A. (2018). An insoluble iron complex coated cathode enhances direct electron uptake by *Rhodospseudomonas palustris* TIE-1. *Bioelectrochemistry*, 122, 164–173. <https://doi.org/10.1016/j.bioelechem.2018.03.015>
- Rytz, T. C., Miller, M. J., McLoughlin, F., Augustine, R. C., Marshall, R. S., Juan, Y.-T., Charng, Y.-Y., Scalf, M., Smith, L. M., & Vierstra, R. D. (2018). SUMOylome profiling

15 Biology Department Publications: 2018

- reveals a diverse array of nuclear targets modified by the SUMO ligase SIZ1 during heat stress. *The Plant Cell*, 30(5), 1077–1099. <https://doi.org/10.1105/tpc.17.00993>
- Schmal, C., Herzog, E. D., & Herzel, H. (2018). Measuring relative coupling strength in circadian systems. *Journal of Biological Rhythms*, 33(1), 84–98. <https://doi.org/10.1177/0748730417740467>
- Sengupta, A., Pakrasi, H. B., & Wangikar, P. P. (2018). Recent advances in synthetic biology of cyanobacteria. *Applied Microbiology and Biotechnology*, 102(13), 5457–5471. <https://doi.org/10.1007/s00253-018-9046-x>
- Shah, V. B., Ferris, C., S Orf, G., Kavadiya, S., Ray, J. R., Jun, Y.-S., Lee, B., Blankenship, R. E., & Biswas, P. (2018). Supramolecular self-assembly of bacteriochlorophyll c molecules in aerosolized droplets to synthesize biomimetic chlorosomes. *Journal of Photochemistry and Photobiology. B, Biology*, 185, 161–168. <https://doi.org/10.1016/j.jphotobiol.2018.04.032>
- Sheikh, S., Thulin, M., Cavender, J. C., Escalante, R., Kawakami, S.-I., Lado, C., Landolt, J. C., Nanjundiah, V., Queller, D. C., Strassmann, J. E., Spiegel, F. W., Stephenson, S. L., Vadell, E. M., & Baldauf, S. L. (2018). A new classification of the Dictyostelids. *Protist*, 169(1), 1–28. <https://doi.org/10.1016/j.protis.2017.11.001>
- Sheldrake, M., Rosenstock, N. P., Mangan, S., Revillini, D., Sayer, E. J., Olsson, P. A., Verbruggen, E., Tanner, E. V. J., Turner, B. L., & Wright, S. J. (2018). Responses of arbuscular mycorrhizal fungi to long-term inorganic and organic nutrient addition in a lowland tropical forest. *The ISME Journal*, 12(10), 2433–2445. <https://doi.org/10.1038/s41396-018-0189-7>

16 Biology Department Publications: 2018

- Sherp, A. M., Westfall, C. S., Alvarez, S., & Jez, J. M. (2018). Arabidopsis thaliana GH3.15 acyl acid amido synthetase has a highly specific substrate preference for the auxin precursor indole-3-butyric acid. *The Journal of Biological Chemistry*, 293(12), 4277–4288. <https://doi.org/10.1074/jbc.RA118.002006>
- Shu, L., Zhang, B., Queller, D. C., & Strassmann, J. E. (2018). Burkholderia bacteria use chemotaxis to find social amoeba Dictyostelium discoideum hosts. *The ISME Journal*, 12(8), 1977–1993. <https://doi.org/10.1038/s41396-018-0147-4>
- Singh, A. K., Kishore, G. M., & Pakrasi, H. B. (2018). Emerging platforms for co-utilization of one-carbon substrates by photosynthetic organisms. *Current Opinion in Biotechnology*, 53, 201–208. <https://doi.org/10.1016/j.copbio.2018.02.002>
- Spasojevic, M. J., Catano, C. P., LaManna, J. A., & Myers, J. A. (2018). Integrating species traits into species pools. *Ecology*, 99(6), 1265–1276. <https://doi.org/10.1002/ecy.2220>
- Stadnytskyi, V., Orf, G. S., Blankenship, R. E., & Savikhin, S. (2018). Near shot-noise limited time-resolved circular dichroism pump-probe spectrometer. *The Review of Scientific Instruments*, 89(3), 033104. <https://doi.org/10.1063/1.5009468>
- Stein, P. S. G. (2018). Central pattern generators in the turtle spinal cord: Selection among the forms of motor behaviors. *Journal of Neurophysiology*, 119(2), 422–440. <https://doi.org/10.1152/jn.00602.2017>
- Suga, N. (2018). Specialization of the auditory system for the processing of bio-sonar information in the frequency domain: Mustached bats. *Hearing Research*, 361, 1–22. <https://doi.org/10.1016/j.heares.2018.01.012>
- Sutherland, M. C., Jarodsky, J. M., Ovchinnikov, S., Baker, D., & Kranz, R. G. (2018). Structurally mapping endogenous heme in the CcmCDE membrane complex for

cytochrome c biogenesis. *Journal of Molecular Biology*, 430(8), 1065–1080.

<https://doi.org/10.1016/j.jmb.2018.01.022>

Tackenberg, M. C., Jones, J. R., Page, T. L., & Hughey, J. J. (2018). Tau-independent phase analysis: A novel method for accurately determining phase shifts. *Journal of Biological Rhythms*, 33(3), 223–232. <https://doi.org/10.1177/0748730418768116>

Ungerer, J., Lin, P.-C., Chen, H.-Y., & Pakrasi, H. B. (2018). Adjustments to photosystem stoichiometry and electron transfer proteins are key to the remarkably fast growth of the cyanobacterium *Synechococcus elongatus* UTEX 2973. *mBio*, 9(1), e02327-17.

<https://doi.org/10.1128/mBio.02327-17>

Üstün, S., Hafren, A., Liu, Q., Marshall, R. S., Minina, E. A., Bozhkov, P. V., Vierstra, R. D., & Hofius, D. (2018). Bacteria exploit autophagy for proteasome degradation and enhanced virulence in plants. *The Plant Cell*, 30(3), 668–685. <https://doi.org/10.1105/tpc.17.00815>

Vallone, A., D'Alessandro, S., Brogi, S., Brindisi, M., Chemi, G., Alfano, G., Lamponi, S., Lee, S. G., Jez, J. M., Koolen, K. J. M., Dechering, K. J., Saponara, S., Fusi, F., Gorelli, B., Taramelli, D., Parapini, S., Caldelari, R., Campiani, G., Gemma, S., & Butini, S. (2018). Antimalarial agents against both sexual and asexual parasites stages: Structure-activity relationships and biological studies of the Malaria Box compound 1-[5-(4-bromo-2-chlorophenyl)furan-2-yl]-N-[(piperidin-4-yl)methyl]methanamine (MMV019918) and analogues. *European Journal of Medicinal Chemistry*, 150, 698–718.

<https://doi.org/10.1016/j.ejmech.2018.03.024>

Van Horn, T. R., Adalsteinsson, S. A., Westby, K. M., Biro, E., Myers, J. A., Spasojevic, M. J., Walton, M., & Medley, K. A. (2018). Landscape physiognomy influences abundance of

18 Biology Department Publications: 2018

- the lone star tick, *Amblyomma americanum* (Ixodida: Ixodidae), in Ozark forests. *Journal of Medical Entomology*, 55(4), 982–988. <https://doi.org/10.1093/jme/tjy038>
- Vigueira, C. C., Qi, X., Song, B.-K., Li, L.-F., Caicedo, A. L., Jia, Y., & Olsen, K. M. (2019). Call of the wild rice: *Oryza rufipogon* shapes weedy rice evolution in Southeast Asia. *Evolutionary Applications*, 12(1), 93–104. <https://doi.org/10.1111/eva.12581>
- Wang, X., Wiegand, T., Anderson-Teixeira, K. J., Bourg, N. A., Hao, Z., Howe, R., Jin, G., Orwig, D. A., Spasojevic, M. J., Wang, S., Wolf, A., & Myers, J. A. (2018). Ecological drivers of spatial community dissimilarity, species replacement and species nestedness across temperate forests. *Global Ecology and Biogeography*, 27(5), 581–592. <https://doi.org/10.1111/geb.12719>
- Waselkov, K. E., Boleda, A. S., & Olsen, K. M. (2018). A phylogeny of the genus *amaranthus* (Amaranthaceae) based on several low-copy nuclear loci and chloroplast regions. *Systematic Botany*, 43(2), 439–458. <https://doi.org/10.1600/036364418X697193>
- Wedger, M. J., & Olsen, K. M. (2018). Evolving insights on weedy rice. *Ecological Genetics and Genomics*, 7–8, 23–26. <https://doi.org/10.1016/j.egg.2018.03.005>
- Wehrens, M., Ershov, D., Rozendaal, R., Walker, N., Schultz, D., Kishony, R., Levin, P. A., & Tans, S. J. (2018). Size laws and division ring dynamics in filamentous *Escherichia coli* cells. *Current Biology*, 28(6), 972-979.e5. <https://doi.org/10.1016/j.cub.2018.02.006>
- Westfall, C. S., & Levin, P. A. (2018). Comprehensive analysis of central carbon metabolism illuminates connections between nutrient availability, growth rate, and cell morphology in *Escherichia coli*. *PLoS Genetics*, 14(2), e1007205. <https://doi.org/10.1371/journal.pgen.1007205>

19 Biology Department Publications: 2018

- Wiley, E. A., Horrell, S., Yoshino, A., Schornak, C. C., Bagnani, C., & Chalker, D. L. (2018). Diversification of HP1-like chromo domain proteins in *tetrahymena thermophila*. *The Journal of Eukaryotic Microbiology*, *65*(1), 104–116. <https://doi.org/10.1111/jeu.12443>
- Wilson Sayres, M. A., Hauser, C., Sierk, M., Robic, S., Rosenwald, A. G., Smith, T. M., Triplett, E. W., Williams, J. J., Dinsdale, E., Morgan, W. R., Burnette, J. M., Donovan, S. S., Drew, J. C., Elgin, S. C. R., Fowlks, E. R., Galindo-Gonzalez, S., Goodman, A. L., Grandgenett, N. F., Goller, C. C., ... Pauley, M. A. (2018). Bioinformatics core competencies for undergraduate life sciences education. *PloS One*, *13*(6), e0196878. <https://doi.org/10.1371/journal.pone.0196878>
- Wolf, B. M., Niedzwiedzki, D. M., Magdaong, N. C. M., Roth, R., Goodenough, U., & Blankenship, R. E. (2018). Characterization of a newly isolated freshwater Eustigmatophyte alga capable of utilizing far-red light as its sole light source. *Photosynthesis Research*, *135*(1–3), 177–189. <https://doi.org/10.1007/s11120-017-0401-z>
- Xin, Y., Shi, Y., Niu, T., Wang, Q., Niu, W., Huang, X., Ding, W., Yang, L., Blankenship, R. E., Xu, X., & Sun, F. (2018). Cryo-EM structure of the RC-LH core complex from an early branching photosynthetic prokaryote. *Nature Communications*, *9*(1), 1568. <https://doi.org/10.1038/s41467-018-03881-x>
- Zheng, X.-M., Gong, T., Ou, H.-L., Xue, D., Qiao, W., Wang, J., Liu, S., Yang, Q., & Olsen, K. M. (2018). Genome-wide association study of rice grain width variation. *Genome*, *61*(4), 233–240. <https://doi.org/10.1139/gen-2017-0106>