PUBLICATIONS
Biochemistry and Molecular Biology Faculty
2013

Barchinger, S. E. and **S. E. Ades**. Regulated proteolysis: Control of the σ^E-dependent cell envelope stress response. In: Regulated Proteolysis in Microorganisms, Subcellular Biochemistry, Vol. 66. (D. Dougan, ed.), pp. 129-160, Springer Science+Business Media, Dordrecht, The Netherlands.

Fei, Li, C. Jiang, K. W. Krausz, Y. Li, **I. Albert**, H. Hao, K. M. Fabre, J. B. Mitchell, A. D. Patterson, and F. J. Gonzalez. Microbiome remodelling leads to inhibition of intestinal farnesoid X receptor signalling and decreased obesity. Nat. Commun. 4:2384.

Vargas, I. T., **I. U. Albert**, and J. M. Regan. Spatial distribution of bacterial communities on volumetric and planar anodes in single-chamber air-cathode microbial fuel cells. Biotechnol. Bioeng. 110:3059-3062.

Mukherjee, S., **P. Babitzke**, and D. B. Kearns. FliW and FliS function independently to control cytoplasmic flagellin levels in *Bacillus subtilis*. J. Bacteriol. 195:297-306.

Romeo, T., C. A. Vakulskas, and **P. Babitzke**. Posttranscriptional regulation on a global scale: Form and function of Csr/Rsm systems. Env. Microbiol. 15:313-324.

Yakhnin, A. V., C. S. Baker, C. A. Vakulskas, H. Yakhnin, I. Berezin, T. Romeo, and **P. Babitzke**. CsrA activates *flhDC* expression by protecting *flhDC* mRNA from RNase E-mediated cleavage. Mol. Microbiol. 87:851-866.

Patterson-Fortin, L. M., C. A. Vakulskas, H. Yakhnin, **P. Babitzke**, and T. Romeo. Dual posttranscriptional regulation via a cofactor-responsive mRNA leader. J. Mol. Biol. 425:3662-3677.

Zhang, Q., Y. Yoon, Y. Yu, E. J. Parnell, J. A. R. Garay, M. M. Mwangi, F. R. Cross, D. J. Stillman, and **L. Bai**. Stochastic expression and epigenetic memory at the yeast HO promoter. Proc. Natl. Acad. Sci. USA 110:14012-14017.

Ma, J., **L. Bai**, and M. D. Wang. Transcription under Torsion. Science 28:1580-1583.

Li, J., Y. Liu, H. S. Rhee, B. S. Ghosh, **L. Bai**, B. F. Pugh, and D. S. Gilmour. Kinetic competition between elongation rate and binding of NELF controls promoter proximal pausing. Mol. Cell 50:711-722.

Dassama, L. M. K., C. Krebs, J. M. Bollinger, Jr., A. C. Rosenzweig, and **A. K. Boal**. Structural basis for assembly of the Mn^{IV}/Fe^{III} cofactor in the class Ic ribonucleotide reductase from *Chlamydia trachomatis*. Biochemistry 52:6424-6436.

Wörsdörfer, B., M. Lingaraju, N. H. Yennawar, **A. K. Boal**, C. Krebs, J. M. Bollinger, Jr., and M. E. Pandelia. Organophosphonate-degrading PhnZ reveals an emerging family of HD domain mixed-valent diiron oxygenases. Proc. Natl. Acad. Sci. USA 110:18874-18879.

Krebs, C., L. M. K. Dassama, M. L. Matthews, W. Jiang, J. C. Price, V. Korboukh, N. Li, and **J. M. Bollinger, Jr.** Novel approaches for the accumulation of oxygenated intermediates to multi-millimolar concentrations. Coordin. Chem. Rev. 257:234-243.

Kwak, Y., W. Jiang, L. M. K. Dassama, K. Park, C. B. Bell, L. V. Liu, S. D. Wong, M. Saito, Y. Kobayshi, S. Kitao, M. Seto, Y. Yoda, E. E. Alp, J. Zhao, **J. M. Bollinger, Jr.**, C. Krebs, and E. I. Solomon. Geometric and electronic structure of the Mn(IV)Fe(III) cofactor in class Ic ribonucleotide reductase: correlation to the class Ia binuclear non-heme iron enzyme. J. Am. Chem. Soc. 135:17573−17584.

Pandelia, M. E., N. Li, H. Nørgaard, D. M. Warui, L. J. Rajakovich, W. C. Chang, S. J. Booker, C. Krebs, and **J. M. Bollinger, Jr.** Substrate-triggered addition of dioxygen to the diferrous cofactor of aldehyde-deformylating xxygenase to form a diferric-peroxide intermediate. J. Am. Chem. Soc. 135:15801−15812.

Dassama, L. M. K., C. Krebs, **J. M. Bollinger, Jr.**, A. C. Rosenzweig, and A. K. Boal. Structural basis for assembly of the MnIV/FeIII cofactor in the class Ic ribonucleotide reductase from *Chlamydia trachomatis*. Biochemistry 52:6424−6436.

Wörsdörfer, B., D. A. Conner, K. Yokoyama, J. Livada, M. Seyedsayamdost, W. Jiang, J. Stubbe, **J. M. Bollinger, Jr.**, and C. Krebs. Function of the diiron cluster of Escherichia coli class Ia ribonucleotide reductase in proton-coupled electron transfer. J. Am. Chem. Soc. 135:8585−8593.

Wörsdörfer, B., M. Lingarajub, N. H. Yennawar, A. K. Boal, C. Krebs, **J. M. Bollinger, Jr.**, and M. E. Pandelia. Organophosphonate-degrading PhnZ reveals anemerging family of HD domain mixed-valent diiron oxygenases. Proc. Natl. Acad. Sci. USA 110:18874-18879.

Wong, S. D., M. Srnec, M. L. Matthews, L. V. Liu, Y. Kwak, K. Park, C. B. Bell, E. E. Alp, J. Zhao, Y. Yoda, S. Kitao, M. Seto, C. Krebs, **J. M. Bollinger, Jr.**, and E. I. Solomon. Elucidation of the Fe(IV)=O intermediate in the catalytic cycle of the halogenase SyrB2. Nature 499:320-324.

Dassama, L. M. K., A. Silakov, C. M. Krest, J. C. Calixto, C. Krebs, **J. M. Bollinger, Jr.**, and M. T. Green. A 2.8 Å Fe−Fe separation in the Fe2III/IV intermediate, **X**, from Escherichia coli ribonucleotide reductase. J. Am. Chem. Soc. 135:16758-16761.

Wang, C., W. C. Chang, Y. Guo, H. Huang, S. C. Peck, M. E. Pandelia, G. M. Lin, H. W. Liu, C. Krebs, and **Bollinger, J. M., Jr.** Evidence that the fosfomycin-producing epoxidase, HppE, is a non–heme-iron peroxidase. Science 342:991-995.

Anton, B. P., Y. C. Chang, P. Brown, H. P. Choi, L. L. Faller, J. Guleria, Z. Hu, N. Klitgord, A. Levy-Moonshine, A. Maksad, V. Mazumdar, M. McGettrick, L. Osmani, R. Pokrzywa, J. Rachlin, R. Swaminathan, B. Allen, G. Housman, C. Monahan, K. Rochussen, K. Tao, A. S. Bhagwat, S. E. Brenner, L. Columbus, V. de Cre´cy-Lagard, D. Ferguson, A. Fomenkov, G. Gadda, R. D. Morgan, A. L. Osterman, D. A. Rodionov, I. A. Rodionova, K. E. Rudd, D. Soll, J. Spain, S. Y. Xu, A. Bateman, R. M. Blumenthal, **J. M. Bollinger, Jr.**, W. S. Chang, M. Ferrer, I. Friedberg, M. Y. Galperin, J. Gobeill, D. Haft, J. Hunt, P. Karp, W. Klimke, C. Krebs, D. Macelis, R. Madupu, M. J. Martin, J. H. Miller, C. O'Donovan, B. Palsson, P. Ruch, A. Setterdahl, G. Sutton, J. Tate, A. Yakunin, D. Tchigvintsev, G. Plata, J. Hu, R. Greiner, D. Horn, K. Sjo¨lander, S. L. Salzberg, D. Vitkup, S. Letovsky, D. Segre, C. DeLisi, R. J. Roberts, M. Steffen, and S. Kasif. The COMBREX Project: Design, Methodology, and Initial Results. PLOS Biol. 11(8),e1001638.

Snyder, R. A., C. B. Bell, Y. Diao, C. Krebs, **J. M. Bollinger, Jr.**, and E. I. Solomon. Circular dichroism, magnetic circular dichroism, and variable temperature variable field magnetic circular dichroism studies of biferrous and mixed-valent myo-inositol oxygenase: insights into substrate activation of O_2 reactivity. J. Am. Chem. Soc. 135:15851-15863.

Grove, T. L., J. H. Ahlum, R. M. Qin, N. D. Lanz, M. I. Radle, C. Krebs, and **S. J. Booker**. Further characterization of Cys-type and Ser-type anaerobic sulfatase maturating enzymes suggests a commonality in mechanism of catalysis. Biochemistry 52:2874-2887.

Booker, S. J. Are scientists with disabilities the forgotten underrepresented minority? ASBMB Today, April.

Goldman, P. J., T. L. Grove, L. A. Sites, M. I. McLaughlin, **S. J. Booker**, and C. L. Drennan. X-ray structure of an S-adenosylmethionine radical activase reveals an anaerobic solution for formylglycine posttranslational modification. Proc. Natl. Acad. Sci. USA 110:8519-8524.

Landgraf, B. J. and **S. J. Booker**. The ylide has landed. Nature 498:45-47.

Christensen, Q. H., T. L. Grove, **S. J. Booker**, and E. P. Greenberg. A high-throughput screen for quorum-sensing inhibitors that target acyl-homoserine lactone synthases. Proc. Natl. Acad. Sci. USA 110:13815-13820.

Pandelia, M. E., N. Li, H. Nørgaard, D. M. Warui, L. J. Rajakovich, W.-C. Chang, **S. J. Booker**, C. Krebs, and J. M. Bollinger, Jr. Substrate-triggered addition of dioxygen to the differous cofactor of aldehyde-deformylating oxygenase to form a differic-peroxide intermediate. J. Am. Chem. Soc. 135:15801-15812.

Landgraf, B. J., A. J. Arcinas, K.-H. Lee, and **S. J. Booker**. Identification of an intermediate methyl carrier in the radical SAM methylthiotransferases, RimO and MiaB. J. Am. Chem. Soc. 135:15404-15416.

Goldman, P. J., T. L. Grove, **S. J. Booker**, and C. L. Drennan. X-ray analysis of butirosin biosynthetic enzyme BtrN redefines structural motifs for AdoMet radical chemistry. Proc. Natl. Acad. Sci. USA 110:15949-15954.

Xu, Y., L. T. Guerra, Z. Li, G. C. Dismukes, and **D. A. Bryant**. Altered carbohydrate metabolism in glycogen synthase mutants of *Synechococcus* sp. strain PCC 7002. Metab. Eng. 16:56-67.

Klatt, C. G., Z. Liu, M. Ludwig, M. Kühl, S. I. Jensen, **D. A. Bryant**, and D. M. Ward. Temporal metatranscriptomic patterning in phototrophic *Chloroflexi* inhabiting microbial mat in a geothermal spring. ISME J. 7:1775-1789.

Orf, G. S., M. Tank, M. Vogl, D. M. Niedzweidzki, **D. A. Bryant**, and R. E. Blankenship. Spectroscopic insights into the decreased efficiency of chlorosomes containing bacteriochlorophyll *f*. Biochim. Biophys. Acta 1827:493-501.

Li, H., N.-U. Frigaard, and **D. A. Bryant**. [2Fe-2S] proteins in chlorosomes. I. Construction and characterization of mutants lacking CsmI, CsmJ, and CsmX in the chlorosome envelope of *Chlorobaculum tepidum*. Biochemistry 52:1321-1330.

Johnson, T. W., H. Li, N.-U. Frigaard, J. H. Golbeck, and **D. A. Bryant**. [2Fe-2S] proteins in chlorosomes. II. Redox titration of the [2Fe-2S] clusters in the proteins CsmI, CsmJ, and CsmX in the chlorosome envelope of *Chlorobaculum tepidum*. Biochemistry 52:1331-1343.

Inskeep, W. P., Z. J. Jay, S. G. Tringe, M. Herrgard, D. B. Rusch, and the YNP Metagenome Project Steering Committee and Working Group Members. The YNP metagenome project: environmental parameters responsible for microbial distribution in the Yellowstone geothermal ecosystem. Front. Microbio. 4:67.

Klatt, C. G., W. P. Inskeep, M. Herrgard, Z. J. Jay, D. B. Rusch, S. G. Tringe, M. N. Parenteau, D. M. Ward, S. M. Boomer, **D. A. Bryant**, and S. R. Miller. Community structure and function of high-temperature phototrophic microbial mats inhabiting diverse geothermal environments. Front. Microbio. 4:106.

Guerra, L. T., Y. Xu, N. Bennette, K. McNeely, **D. A. Bryant**, and G. C. Dismukes. Metabolic analysis of an ADP-glucose pyrophosphorylase deficient mutant of *Synechococcus* sp. PCC 7002: Evidence that glycogen is the preferred substrate during auto-fermentation. J. Biotech. 166:65-75.

Adams, P. G., A. J. Cadby, B. Robinson, Y. Tsukatani, M. Tank, J. Wen, R. E. Blankenship, **D. A. Bryant**, and C. N. Hunter. Comparison of the physical characteristics of chlorosomes from three different phyla of green phototrophic bacteria. Biochim. Biophys. Acta. 1827:1235-1244.

Kumaraswamy, G. K., T. Guerra, X. Qian, S. Zhang, **D. A. Bryant**, and G. C. Dismukes. Reprogramming the glycolytic pathway for increased hydrogen production in cyanobacteria: metabolic engineering of NAD^+-dependent GAPDH. Energy Environ. Sci. 6:3722-3731.

Saunders, A. M., J. H. Golbeck, and **D. A. Bryant**. Characterization of BciB, a ferredoxin-dependent 8-vinyl protochlorophyllide reductase in (bacterio)chlorophyll biosynthesis. Biochemistry 52:8442-8451.

Kronfel, C. M., A. P. Kuzin, F. Forouhar, A. Biswas, M. Su, S. Lew, J. Seetharaman, R. Xiao, J. K. Everett, L.-C. Ma, T. B. Acton, G. T. Montelione, J. F. Hunt, C. E. C. Paul, T. M. Dragomani, M. N. Boutaghou, R. B. Cole, C. Riml, R. M. Alvey, **D. A. Bryant**, and W. M. Schluchter. Structural and biochemical characterization of the bilin lyase CpcS from *Thermosynechococcus elongatus*. Biochemistry 52:8663-8676.

Liu, Z., J. Müller, T. Li, R. M. Alvey, K. Vogl, N.-U. Frigaard, N. C. Rockwell, L. P. Tomsho, S. C. Schuster, P. Henke, M. Rohde, J. Overmann, and **D. A. Bryant**. Genomic analysis reveals key aspects of prokaryotic symbiosis in the phototrophic consortium "*Chlorochromatium aggregatum*." Genome Biol. 14:R127.

Rodionova, I. A., X. Li, V. Thiel, S. Stolyar, K. Stanton, J. K. Frederickson, **D. A. Bryant**, A. L. Osterman, A. A. Best, and D. A. Rodionov. Comparative genomics and functional analysis of rhamnose catabolic pathways and regulons in Bacteria. Front. Microbio. 4:407.

Bryant, D. A. Green bacteria: chlorophyll biosynthesis, light harvesting, reaction centers and electron transport. In: The Encyclopedia of Biological Chemistry, Vol. 2. (W. Lennarz and D. M. Lane, eds.), pp. 501-509, Academic Press, Waltham, MA.

Bryant, D. A. and Z. Liu. Green bacteria: insights into green bacterial evolution through genomic analyses. In: Advances in Botanical Research, Vol. 66, Genome Evolution of Photosynthetic Bacteria. (J. T. Beatty, ed.), pp. 99-150, Elsevier, New York, NY.

Nallagatla, S. R., C. N. Jones, S. K. Ghosh, S. D. Sharma, **C. E. Cameron**, L. L. Spremulli, and P. C. Bevilacqua. Native tertiary structure and nucleoside modifications suppress tRNA's intrinsic ability to activate the innate immune sensor PKR. PLoS One 8:e57905.

Li, S., X. Ding, F. Guo, Y. Chen, M. I. Lapsley, S. C. Lin, L. Wang, J. P. McCoy, **C. E. Cameron,** and T. J. Huang. An on-chip, multichannel droplet sorter using standing surface acoustic waves. Anal. Chem. 85:5468-5474.

Panigrahi, R., S. Hazari, S. Chandra, P. K. Chandra, S. Datta, R. Kurt, **C. E. Cameron**, Z. Huang, H. Zhang, R. F. Garry, L. A. Balart, and S. Dash. Interferon and ribavirin combination treatment synergistically inhibit HCV internal ribosome entry site mediated translation at the level of polyribosome formation. PLoS One 8:e72791.

Liu, X., X. Yang, C. A. Lee, I. M. Moustafa, E. D. Smidansky, D. Lum, J. J. Arnold, **C. E. Cameron**, and D. D. Boehr. Vaccine-derived mutation in motif D of poliovirus RNA-dependent RNA polymerase lowers nucleotide incorporation fidelity. J. Biol. Chem. 288:32753-32765.

Cameron, C. E. Future virology: A mitochondriac's perspective. Future Virol. 8:933-935.

Li, S., J. Kiehne, L. I. Sinoway, **C. E. Cameron**, and T. J. Huang. Microfluidic opportunities in the field of nutrition. Lab Chip 13:3993-4003.

Hladikova, J., J. Heyda, K. B. Rembert, H. I. Okur, Y. Kurra, W. R. Liu, C. Hilty, **P. S. Cremer**, and P. Jungwirth. Effects of end group termination on salting-out constants for triglycine. J. Phys. Chem. Lett. 4:4069-4073.

Poyton, M. F. and **P. S. Cremer**. Electrophoretic measurements of lipid charges in supported membranes. Anal. Chem. 85:10803-10811.

Huang, D., T. Zhao, W. Xu, T. Yang, and **P. S. Cremer**. Sensing small molecule interactions with lipid membranes by local pH modulation. Anal. Chem. 85:10240-10248.

Paterova, J., K. B. Rembert, J. Heyda, Y. Kurra, H. I. Okur, W. R. Liu, C. Hilty, **P. S. Cremer**, and P. Jungwirth. Reversal of the Hofmeister series: specific ion effects on peptides. J. Phys. Chem. B 117:8150-8158.

Pace, H., S. Sherrod, C. Monson, D. H. Russell, and **P. S. Cremer**. Coupling supported lipid bilayer electrophoresis with MALDI-MS imaging. Anal. Chem. 85:6047-6052.

Zhao, Z., Y. Cai, W.-S. Liao, and **P. S. Cremer**. Stepwise molding, etching, and imprinting to form libraries of nanopatterned substrates. Langmuir 29:6737-6745.

Chamoun-Emanuelli, A. M., E.-I. Pecheur, R. L. Simeon, D. Huang, **P. S. Cremer**, and Z. Chen. Phenothiazines inhibit HCV entry likely by increasing the fluidity of cholesterol-rich membranes. Antimicrob. Agents Chemother. 57:2571-2581.

Okur, H. I., J. Kherb, and **P. S. Cremer**. Cations bind only weakly to amides in aqueous solutions. J. Am. Chem. Soc. 135:5062-5067.

Robison, A. D., D. Huang, H. Jung, and **P. S. Cremer**. Turn-on and turn off sensing of protein-ligand binding by modulating buffer conditions. Biointerphases 8:1-9.

Zimmerman, S. A., J. F. Domsic, C. Tu, A. H. Robbins, R. McKenna, D. N. Silverman, and **J. G. Ferry**. Role of Trp19 and Tyr200 in catalysis by the γ-class carbonic anhydrase from *Methanosarcina thermophila*. Arch. Biochem. Biophys. 529:11-17.

Kumar, R. S., W. Hendrick, J. B. Correll, A. D. Patterson, S. B. Melville, and **J. G. Ferry**. Biochemistry and physiology of the β-class carbonic anhydrase (Cpb) from *Clostridium perfringens* strain 13. J. Bacteriol. 195:2262-2269.

Jasso-Chavez, R., E. E. Apolinario, K. R. Sowers, and **J. G. Ferry**. MrpA functions in energy conversion during acetate-dependent growth of Methanosarcina acetivorans. J. Bacteriol. 195:3987-3994.

Vullo, D., R. S. Sai Kumar, A. Scozzafava, C. Capasso, **J. G. Ferry**, and C. T. Supuran. Anion inhibition studies of a beta-carbonic anhydrase from *Clostridium perfringens*. Bioorg. Med. Chem. Lett. 23:6706-6710.

Ferry, J. G. Carbonic anhydrases of anaerobic microbes. Bioorg. Med. Chem. 21:1392-1395.

Ferry, J. G. Acetate: A key intermediate during the anaerobic degradation of organic matter. In: Acetate: Versatile Building Block of Biology and Chemistry. (D. A. Sanders, ed.), pp. 1-14, Nova, Hauppage, NY.

McAnulty, M. J., V. R. Vepachedu, T. K. Wood, and **J. G. Ferry**. Biofuels: microbially-generated methane and hydrogen. In: eLS. John Wiley & Sons Ltd, Chichester, England. http://www.els.net [doi:10.1002/9780470015902.a0020375].

Appel, A., J. Bercaw, A. Bocarsly, H. Dobbek, D. DuBois, M. Dupuis, **J. Ferry**, E. Fujita, R. Hille, P. Kenis, C. Kerfeld, R. Morris, C. Peden, A. Portis, S. Ragsdale, T. Rauchfuss, J. Reek, L. Seefeldt, R. Thauer, and G. Waldrop. Frontiers, opportunities, and challenges in biochemical and chemical catalysis of CO2 fixation. Chem. Rev. 113:6621-6658.

Ferry, J. G. Zinc and iron, gamma and beta class, carbonic anhydrases of the domain archaea. In: Encyclopedia of Metalloproteins. (V. N. Uversky, R.H. Kretsinger, and E.A. Permyakov, eds.), pp. 2380-2385, Springer-Verlag, Berlin Heidelberg, Germany.

Li, J., Y. Liu, H. S. Rhee, S. K. Ghosh, L. Bai, B. F. Pugh, and **D. S. Gilmour**. Kinetic competition between elongation rate and binding of NELF controls promoter-proximal pausing. Mol. Cell 6:711-722.

Li, J. and **D. S. Gilmour**. Distinct mechanisms of transcriptional pausing orchestrated by GAGA factor and M1BP, a novel transcription factor. EMBO J. 32:1829-1841.

Lagha, M., J. P. Bothma, E. Esposito, S. Ng, L. Stefanik, C. Tsui, J. Johnston, K. Chen, **D. S. Gilmour**, J. Zeitlinger, and M. S. Levine. Paused Pol II coordinates tissue morphogenesis in the Drosophila embryo. Cell 153:976-987.

Natarajan, M., G. M. Schiralli Lester, C. Lee, A. Missra, G. A. Wasserman, M. Steffen, **D. S. Gilmour**, and A. J. Henderson. Negative elongation factor (NELF) coordinates RNA polymerase II pausing, premature termination, and chromatin remodeling to regulate HIV transcription. J. Biol. Chem. 288:25995-26003.

Girirajan, S., R. L. Johnson, F. Tassone, J. Balciuniene, N. Katiyar, K. Fox, C. Baker, A. Srikanth, K-H Yeoh, S. J. Khoo, T. B. Nauth, R. Hansen, M. D. Ritchie, I. Hertz-Picciotto, E. E. Eichler, I. N. Pessah, and S. B. Selleck. Global increases in both common and rare copy number load associated with autism. Hum. Mol. Genet. 22:2870-2880.

Timms, A. E., M. O. Dorschner, J. Wechsler, K. Y. Choi, R. Kirkwood, **S. Girirajan**, C. Baker, E. E. Eichler, O. Korvatska, K. W. Roche, M. S. Horwitz, and D. W. Tsuang. Support for the NMDA receptor 1 hypofunction hypothesis of schizophrenia from exome sequencing in multiplex families. JAMA Psychiatry 70:582-590.

Girirajan, S., M. Y. Dennis, C. Baker, M. Malig, B. P. Coe, C. D. Campbell, K. Mark, T. H. Vu, C. Alkan, Z. Cheng, L. G. Biesecker, R. Bernier, and E. E. Eichler. Refinement and discovery of new hotspots of copy number variation associated with autism spectrum disorder. Am. J. Hum. Genet. 92:221-237.

Beunders, G., E. Voorhoeve, C. Golzio, L. M. Pardo, J. A. Rosenfeld, M. E. Talkowski, I. Simonic, A. C. Lionel, S. Vergult, R. E. Pyatt, J. van de Kamp, A. Nieuwint, M. M. Weiss, P. Rizzu, L. C. Verwer, R. van Spaendonk, Y. Shen, B. Wu, T. Yu, Y. Yu, C. Chiang, J. F. Gusella, A. M. Lindgren, C. C. Morton, E. van Binsbergen, S. Bulk, E. van Rossem, O. Vanakker, R. Armstrong, S. Park, L. Greenhalgh, U. Maye, N. J. Neill, K. M. Abbott, S. Sel, R. Ladda, D. M. Farber, P. I. Bader, T. Cushing, J. M. Drautz, L. Konczal, P. Nash, E. Reyes, M. T. Carter, E. Hopkins, C. R. Marshall, L. R. Osborne, K. W. Gripp, D. L. Thrush, S. Hashimoto, J. M. Gastier-Foster, C. Astbury, B. Ylstra, H. Meijers-Heijboer, D. Posthuma, B. Menten, G. Mortier, S. W. Scherer, E. E. Eichler, **S. Girirajan**, N. Katsanis, A. J. Groffen, and E. A. Sistermans. Deletions in *AUTS2* cause distinct syndromic features and cognitive impairment and suggest a special role for the C-terminus. Am. J. Hum. Genet. 92:210-220.

Aradhya, S., A. M. Cherry, and **S. Girirajan**. Counting chromosomes to exons: Advances in copy number detection. Curr. Genet. Med. Rep. 1:71-80.

Girirajan, S. Genomic disorders: complexity at multiple levels (Meeting report on the 7th Wellcome Trust Genomic Disorders conference). Genome Medicine 5:43.

Chauvet, A., J. Sarrou, S. Lin, S. P. Romberger, **J. H. Golbeck**, S. Savikhin, and K. E. Redding. Temporal and spectral characterization of the photosynthetic reaction center from *Heliobacterium Modesticaldum.* Photosynth. Res. 116:1-9.

Coates, C. S., J. Ziegler, K. Manz, J. Good, B. Kang, S. Milikisiyants, R. Chatterjee, S. Hao, **J. H. Golbeck**, and K. V. Lakshmi. The structure and function of quinones in biological solar energy transduction: a cyclic voltammetry, EPR, and hyperfine sub-level correlation (HYSCORE) spectroscopy study of model naphthoquinones. J. Phys. Chem. B 117:7210-7220.

Johnson, T. W., H. Li, N. U. Frigaard, **J. H. Golbeck**, and D. A. Bryant. [2Fe-2S] Proteins in chlorosomes: redox properties of CsmI, CsmJ, and CsmX of the chlorosome envelope of *Chlorobaculum tepidum.* Biochemistry 52:1331-1343.

Saunders, A. H., **J. H. Golbeck**, and D. A. Bryant. Characterization of BciB: A ferredoxin-dependent 8-vinyl-protochlorophyllide reductase from the green sulfur bacterium *Chloroherpeton thalassium.* Biochemistry 52:8442-8451.

Savitsky, A., J. Niklas, **J. H. Golbeck**, K. Mobius, and W. Lubitz. Orientation resolving dipolar high-field EPR spectroscopy on disordered solids: II. Structure of spin-correlated radical pairs in photosystem I. J. Phys. Chem. B 117:11184-11199.
Surendran Thamarath, S., A. Alia, E. Roy, K. B. Sai Sankar Gupta, **J. H. Golbeck**, and J. Matysik. The field-dependence of the solid-state photo-CIDNP effect in two states of heliobacterial reaction centers. Photosynth. Res. 117:461-469.

Metals in Bioenergetics and Biomimetic Systems. In: Special Issue of Biochim. Biophys. Acta. (**J. H. Golbeck**, T. Moore, and F. Rappaport, eds.), Elsevier, London.

Golbeck, J. H. and A. van der Est. Electron paramagnetic resonance spectroscopy. In: Biophysics for Life Sciences. (N. M. Allewell, L. O. Narhi, and I. Rayment, eds.), pp. 175-214, Springer, New York, NY.

Lei, L., S. Li, J. Du, and **Y. Gu.** Cellulose synthase interactive 3 regulates cellulose biosynthesis in both microtubule-dependent and microtubule-independent manner. Plant Cell. 25:4912-4923.

Bashline, L., S. Li, C. T. Anderson, L. Lei, and **Y. Gu.** The endocytosis of cellulose synthase in Arabidopsis is dependent on m2, a clathrin mediated endocytosis adaptin. Plant Physiol. 163:150-160.

Chang, F., **Y. Gu**, H. Ma, and Z. Yang. AtPRK2 promotes ROP1 activation via RopGEFs in the control of polarized pollen tube growth. Mol. Plant 6:1187-1201.

Li, S., L. Lei, and **Y. Gu**. Functional analysis of complexes with mixed primary and secondary cellulose synthases. Plant Signal. Behav. 8: e23179.

Zhou, K., M. M. Rolls, and **W. Hanna-Rose**. A postmitotic function and distinct localization mechanism for centralspindlin at a stable intercellular bridge. Dev. Biol. 376:13-22.

Crook, M., A. Upadhyay, and **W. Hanna-Rose**. Necrosis in *C. elegans*. In: Methods in Molecular Biology, Vol. 1004. (K. McCall and C. Klein, eds.), pp. 171-182, Springer.

Zheng, R., B. Rebolledo-Jaramillo, Y. Zong, L. Wang, P. Russo, W. Hancock, B. Z. Stanger, **R. C. Hardison**, and G. A. Blobel. Function of GATA factors in the adult mouse liver. PLoS ONE 8:e83723.

Mortazavi, A., S. Pepke, C. Jansen, G. K. Marinov, J. Ernst, M. Kellis, **R. C. Hardison**, R. M. Myers, and B. J. Wold. Integrating and mining the chromatin landscape of cell-type specificity using self-organizing maps. Genome Res. 23:2136-2148.

Su, M. Y., L. A. Steiner, H. Bogardus, T. Mishra, V. P. Schulz, **R. C. Hardison**, and P. G. Gallagher. Identification of biologically relevant enhancers in human erythroid cells. J. Biol. Chem. 288:8433-8444.

Hoffman, M. M., J. Ernst, S. P. Wilder, A. Kundaje, R. S. Harris, M. Libbrecht, B. Giardine, P. M. Ellenbogen, J. A. Bilmes, E. Birney, **R. C. Hardison**, I. Dunham, M. Kellis, and W. S. Noble. Integrative annotation of chromatin elements from ENCODE data. Nucl. Acids Res. 41:827-841.

Intelicato-Young, J. and A. Fox. Mass spectrometry and tandem mass spectrometry characterization of protein patterns, protein markers and whole proteomes for pathogenic bacteria. J. Microbiol. Methods 92:381-386.

Sun, P. and **T-h. Kao**. Self-incompatibility in *Petunia inflata*: the relationship between a self-incompatibility locus F-box protein and its non-self S-RNases. Plant Cell 25:470-485.

Guo, J., J. M. Catchmark, M. N. A. Mohamed, A. J. Benesi, M. Tien, **T-h. Kao**, H. D. Watts, and J. D. Kubicki. Identification and characterization of a cellulose binding heptapeptide revealed by phage display. Biomacromolecules 14:1795-1805.

Deng, Y., N. Nagachar, C. Xiao, M. Tien, and **T-h. Kao**. Identification and characterization of non-cellulose-producing mutants of *Gluconacetobacter hansenii* generated by Tn5 transposon mutagenesis. J. Bacteriol. 195:5072-5083.

Williams, J. S., C. A. Natale, N. Wang, S. Li, T. R. Brubaker, P. Sun, and **T-h. Kao**. Four previously identified *Petunia inflata S-locus-F-box* genes are involved in pollen specificity in self-incompatibility. Mol. Plant doi:10.1093/mp/sst155

Ramadoss, N. S., J. N. Alumasa, L. Cheng, Y. Wang, S. Li, B. S. Chambers, H. Chang, A. K. Chatterjee, A. Brinker, I. H. Engels, and **K. C. Keiler**. Small molecule inhibitors of *trans*-translation have broad-spectrum antibiotic activity. Proc. Natl. Acad. Sci. USA 110:10282-10287.

Keiler, K. C. Tsp protease. In: Handbook of Proteolytic Enzymes, 3rd ed. (N. Rawlings and G. Salvesen, eds.), pp. 3605-3606, Elsevier, Oxford, UK.

Esakova, O., A. Perederina, I. Berezin, and **A. S. Krasilnikov**. Conserved regions of ribonucleoprotein ribonuclease MRP are involved in interactions with its substrate. Nucl. Acids Res. 41:7084-7091.

Ananda, G., E. Walsh, K. D. Jacob, **M. Krasilnikova**, K. A. Eckert, F. Chiaromonte, and K. D. Makova. Distinct mutational behaviors differentiate short tandem repeats from microsatellites in the human genome. Genome Biol. Evol. 5:606-620.

Baptiste, B., G. Ananda, N. Strubczewski, A. Lutzkanin, S. J. Khoo, A. Srikanth, N. Kim, K. D. Makova, **M. M. Krasilnikova**, and K. A. Eckert. Mature microsatellites: mechanisms underlying dinucleotide microsatellite mutational biases in human cells. G3 3:451-463.

Krebs, C., L. M. K. Dassama, M. L. Matthews, W. Jiang, J. C. Price, V. Korboukh, N. Li, and J. M. Bollinger, Jr. Novel approaches for the accumulation of oxygenated intermediates to multi-millimolar concentrations. Coordin. Chem. Rev. 257:234-243.

McCarty, R. M., **C. Krebs**, and V. Bandarian. Spectroscopic, steady-state kinetic, and mechanistic characterization of the radical SAM enzyme QueE, which catalyzes a complex cyclization reaction in the biosynthesis of 7-deazapurines. Biochemistry 52:188-198.

Kwak, Y., W. Jiang, L. M. K. Dassama, K. Park, C. B. Bell, L. V. Liu, S. D. Wong, M. Saito, Y. Kobayshi, S. Kitao, M. Seto, Y. Yoda, E. E. Alp, J. Zhao, J. M. Bollinger, Jr., **C. Krebs**, and E. I. Solomon. Geometric and electronic structure of the Mn(IV)Fe(III) cofactor in class Ic ribonucleotide reductase: correlation to the class Ia binuclear non-heme iron enzyme. J. Am. Chem. Soc. 135:17573−17584.

Grove, T. L., J. H. Ahlum, R. M. Qin, N. D. Lanz, M. I. Radle, **C. Krebs**, and S. J. Booker. Further characterization of Cys-type and Ser-type anaerobic sulfatase maturating enzymes suggests a commonality in mechanism of catalysis. Biochemistry 52:2874-2887.

Pandelia, M. E., N. Li, H. Nørgaard, D. M. Warui, L. J. Rajakovich, W.-C. Chang, S. J. Booker, **C. Krebs**, and J. M. Bollinger, Jr. Substrate-triggered addition of dioxygen to the differous cofactor of aldehyde-deformylating oxygenase to form a differic-peroxide intermediate. J. Am. Chem. Soc. 135:15801-15812.

Dassama, L. M. K., **C. Krebs**, J. M. Bollinger, Jr., A. C. Rosenzweig, and A. K. Boal. Structural basis for assembly of the MnIV/FeIII cofactor in the class Ic ribonucleotide reductase from *Chlamydia trachomatis*. Biochemistry 52:6424−6436.

Wörsdörfer, B., D. A. Conner, K. Yokoyama, J. Livada, M. Seyedsayamdost, W. Jiang, J. Stubbe, J. M. Bollinger, Jr., and **C. Krebs**. Function of the diiron cluster of Escherichia coli class Ia ribonucleotide reductase in proton-coupled electron transfer. J. Am. Chem. Soc. 135:8585−8593.

Wörsdörfer, B., M. Lingarajub, N. H. Yennawar, A. K. Boal, **C. Krebs**, J. M. Bollinger, Jr., and M. E. Pandelia. Organophosphonate-degrading PhnZ reveals anemerging family of HD domain mixed-valent diiron oxygenases. Proc. Natl. Acad. Sci. USA 110:18874-18879.

Wong, S. D., M. Srnec, M. L. Matthews, L. V. Liu, Y. Kwak, K. Park, C. B. Bell, E. E. Alp, J. Zhao, Y. Yoda, S. Kitao, M. Seto, **C. Krebs**, J. M. Bollinger, Jr., and E. I. Solomon. Elucidation of the Fe(IV)=O intermediate in the catalytic cycle of the halogenase SyrB2. Nature 499:320-324.

Dassama, L. M. K., A. Silakov, C. M. Krest, J. C. Calixto, **C. Krebs**, J. M. Bollinger, Jr., and M. T. Green. A 2.8 Å Fe−Fe separation in the Fe2III/IV intermediate, **X**, from Escherichia coli ribonucleotide reductase. J. Am. Chem. Soc. 135:16758-16761.

Wang, C., W. C. Chang, Y. Guo, H. Huang, S. C. Peck, M. E. Pandelia, G. M. Lin, H. W. Liu, **C. Krebs**, and Bollinger, J. M., Jr. Evidence that the fosfomycin-producing epoxidase, HppE, is a non–heme-iron peroxidase. Science 342:991-995.

Anton, B. P., Y. C. Chang, P. Brown, H. P. Choi, L. L. Faller, J. Guleria, Z. Hu, N. Klitgord, A. Levy-Moonshine, A. Maksad, V. Mazumdar, M. McGettrick, L. Osmani, R. Pokrzywa, J. Rachlin, R. Swaminathan, B. Allen, G. Housman, C. Monahan, K. Rochussen, K. Tao, A. S. Bhagwat, S. E. Brenner, L. Columbus, V. de Cre´cy-Lagard, D. Ferguson, A. Fomenkov, G.

Gadda, R. D. Morgan, A. L. Osterman, D. A. Rodionov, I. A. Rodionova, K. E. Rudd, D. Soll, J. Spain, S. Y. Xu, A. Bateman, R. M. Blumenthal, J. M. Bollinger, Jr., W. S. Chang, M. Ferrer, I. Friedberg, M. Y. Galperin, J. Gobeill, D. Haft, J. Hunt, P. Karp, W. Klimke, **C. Krebs**, D. Macelis, R. Madupu, M. J. Martin, J. H. Miller, C. O'Donovan, B. Palsson, P. Ruch, A. Setterdahl, G. Sutton, J. Tate, A. Yakunin, D. Tchigvintsev, G. Plata, J. Hu, R. Greiner, D. Horn, K. Sjo¨lander, S. L. Salzberg, D. Vitkup, S. Letovsky, D. Segre, C. DeLisi, R. J. Roberts, M. Steffen, and S. Kasif. The COMBREX Project: Design, Methodology, and Initial Results. PLOS Biol. 11(8),e1001638.

Snyder, R. A., C. B. Bell, Y. Diao, **C. Krebs**, J. M. Bollinger, Jr., and E. I. Solomon. Circular dichroism, magnetic circular dichroism, and variable temperature variable field magnetic circular dichroism studies of biferrous and mixed-valent myo-inositol oxygenase: insights into substrate activation of O2 reactivity. J. Am. Chem. Soc. 135:15851-15863.

Li, J., X. Chen, X. Ding, Y. Cheng, B. Zhao, **Z.-C. Lai**, K. A. Hezaimi, R. Hakem, K.-L. Guan, and C.-Y. Wang. LATS2 suppresses oncogenic Wnt signaling by disrupting β-catenin/BCL9 interaction. Cell Reports 5:1650-1663.

Matsui, Y. and **Z.-C. Lai**. Mutual regulation between Hippo signaling and actin cytoskeleton. Protein & Cell 4:904-910.

Yu, T., J. Bachman, and **Z.-C. Lai**. Evidence for a tumor suppressor role for the large tumor suppressor genes LATS1 and LATS2 in human cancer. Genetics 195:1193-1196.

Zhang, Y. and **Z.-C. Lai**. Mob as tumor suppressor is regulated by bantam microRNA through a feedback loop for growth control. Biochem. Biophys. Res. Commun. 439:438-442.

Yu, F., Y. Zhang, H. W. Park, J. Jewell, Q. Chen, Y. Deng, D. Pan, S. S. Taylor, **Z.-C. Lai**, and K.-L. Guan. Protein kinase A activates the Hippo pathway to modulate cell proliferation and differentiation. Genes & Dev. 27:1223-1232.

Song, S., J. Lu, Q. Li, Y. Yuan, Z. Zhu, Q. Fan, Y. Xue, **Z.-C. Lai**, and W. Zhang. The Drosophila ortholog of breast cancer metastasis suppressor gene, dBrms1, is critical for developmental timing through regulating ecdysone signaling. Dev. Biol. 380:344-350.

Deng, Y., Y. Matsui, Y. Zhang, and **Z.-C. Lai**. Hippo activation through homodimerization and membrane association for growth inhibition and organ size control. Dev. Biol. 375:152-159.

Konagurthu, A. S. and **A. M. Lesk**. Structure description and identification using the tableau representation of protein folding patterns. Methods Mol. Biol. 932:51-59.

Lesk, A. M. Introduction to Bioinformatics, 4th ed. Oxford University Press, Oxford, UK.

Mailu, B. M., G. Ramasamay, D. G. Mudeppa, L. Li, **S. E. Lindner**, M. J. Peterson, A. E. DeRocher, S. H. Kappe, P. K. Rathod, and M. J. Gardner. A nondiscriminating glutamyl-tRNA synthetase in the plasmodium apicoplast: the first enzyme in an indirect aminoacylation pathway. J. Biol. Chem. 288:32539-32552.

Pei, Y., J. L. Miller, **S. E. Lindner**, A. M. Vaughan, M. Torii, and S. H. Kappe. *Plasmodium yoelii* inhibitor of cysteine proteases is exported to exomembrane structures and interacts with yoelipain-2 during asexual blood-stage development. Cell. Microbiol. 15:1508-1526.

Lindner, S. E., S. A. Mikolajczak, A. M. Vaughan, W. Moon, B. R. Joyce, W. J. Sullivan, Jr., and S. H. Kappe. Perturbations of Plasmodium Puf2 expression and RNA-seq of Puf2-deficient sporozoites reveal a critical role in maintaining RNA homeostasis and parasite transmissibility. Cell. Microbiol. 15:1266-1283.

Lindner, S. E., K. E. Swearingen, A. Harupa, A. M. Vaughan, P. Sinnis, R. L. Moritz, and S. H. Kappe. Total and putative surface proteomics of malaria parasite salivary gland sporozoites. Mol. Cell. Proteomics 12:1127-1143.

Radke, J. B., O. Lucas, E. K. De Silva, Y. Ma, W. J. Sullivan, Jr., L. M. Weiss, **M. Llinás**, and M. W. White. ApiAP2 transcription factor restricts development of the Toxoplasma tissue cyst. Proc. Natl. Acad. Sci. USA 110:6871-6876.

Carter, L. M., B. Kafsack, **M. Llinás**, L. Pollitt, and S. Reece. Stress and sex in malaria parasites: Why does commitment vary? EMPH 1:135-147.

Mira-Martínez, S., N. Rovira-Graells, V. M. Crowley, L. M. Altenhofen, **M. Llinás**, and A. Cortés. Epigenetic switches in clag3 genes mediate blasticidin S resistance in malaria parasites. Cell. Microbiol. 15:1913-1923.

Caudy, A. A., Y. Guan, Y. Jia, C. Hansen, C. DeSevo, A. P. Hayes, J. Agee, J. R. Alvarez-Dominguez, H. Arellano, D. Barrett, C. Bauerle, N. Bisaria, P. H. Bradley, J. S. Breunig, E. Bush, D. Cappel, E. Capra, W. Chen, J. Clore, P. A. Combs, C. Doucette, O. Demuren, P. Fellowes, S. Freeman, E. Frenkel, D. Gadala-Maria, R. Gawande, D. Glass, S. Grossberg, A. Gupta, L. Hammonds-Odie, A. Hoisos, J. Hsi, Y.-H. Huang Hsu, S. Inukai, K. J. Karczewski, X. Ke, M. Kojima, S. Leachman, D. Lieber, A. Liebowitz, J. Liu, Y. Liu, T. Martin, J. Mena, R. Mendoza, C. Myhrvold, C. Millian, S. Pfau, S. Raj, M. Rich, J. Rokicki, W. Rounds, M. Salazar, M. Salesi, R. Sharma, S. Silverman, C. Singer, S. Sinha, M. Staller, P. Stern, H. Tang, S. Weeks, M. Weidmann, A. Wolf, C. Young, J. Yuan, C. Crutchfield, M. McClean, C. T. Murphy, **M. Llinás**, D. Botstein, O. G. Troyanskaya, and M. J. Dunham. A new system for comparative functional genomics of *Saccharomyces* yeasts. Genetics 195:275-287.

Cobbold, S. A., A. M. Vaughan, I. A. Lewis, H. J. Painter, N. Camargo, D. H. Perlman, M. Fishbaugher, J. Healer, A. F. Cowman, S. H. I. Kappe, and **M. Llinás**. Kinetic flux profiling elucidates two independent acetyl-CoA biosynthetic pathways in *Plasmodium falciparum*. J. Biol. Chem. 288:36338-36350.

Reid, C. A., T. Kim, A. M. Phillips, J. Low, S. F. Berkovic, **B. Luscher**, and S. Petrou. Multiple molecular mechanisms for a single GABAA mutation in epilepsy. Neurology 80:1003-1008.

Luscher, B. and T. Fuchs. Adult hippocampal neurogenesis in the absence of serotonin. Eur. J. Neurosci. 38:2649.

Paik, E. J., **S. Mahony**, R. M. White, E. N. Price, A. DiBiase, B. Dorjsuren, C. Mosimann, A. J. Davidson, D. K. Gifford, and L. I. Zon. A Cdx4-Sall4 regulatory module controls the transition from mesoderm formation to embryonic hematopoiesis. Stem Cell Reports 1:425-436.

Mazzoni, E. O., **S. Mahony**, M. Closser, C. A. Morrison, S. Nedelec, D. J. Williams, D. An, D. K. Gifford, and H. Wichterle. Synergistic binding of transcription factors to cell-specific enhancers programs motor neuron identity. Nat. Neurosci. 16:1219-1227.

Mazzoni, E. O., **S. Mahony**, M. Peljto, T. Patel, S. R. Thornton, S. McCuine, C. Reeder, L. A. Boyer, R. A. Young, D. K. Gifford, and H. Wichterle. Saltatory remodeling of Hox chromatin in response to rostrocaudal patterning signals. Nat. Neurosci. 16:1191-1198.

Arbab, M., **S. Mahony**, H. Cho, J. Chick, P. A. Rolfe, J. Van Hoff, V. Morris, S. Gygi, R. L. Maas, D. K. Gifford, and R. Sherwood. A multi-parametric flow cytometric assay to analyze DNA-protein interactions. Nucl. Acids Res. 41:e38.

Hess, A. R., G. D. Barber, C. Chen, **T. E. Mallouk**, and H. R. Allcock. Organophosphates as solvents for electrolytes in electrochemical devices. ACS Adv. Mater. Interf. 5:13029-13034.

Ahmed, S., W. Wang, L. O. Mair, R. D. Fraleigh, S. Li, L. A. Castro, M. Hoyos, T. J. Huang, and **T. E. Mallouk**. Steering acoustically propelled nanowire motors towards cells in a biologically compatible environment using magnetic fields. Langmuir 29:16113-16118.

Hall, A. S., A. Kondo, K. Maeda, and **T. E. Mallouk**. Microporous brookite-phase titania made by replication of a metal-organic framework. J. Am. Chem. Soc. 135:16276-16279.

Wang, W., W. Duan, S. Ahmed, **T. E. Mallouk**, and A. Sen. Small power: autonomous nano- and micromotors propelled by self-generated gradients. Nano Today 8:531-554.

Wang, W., W. Duan, A. Sen, and **T. E. Mallouk**. Catalytically-powered dynamic assembly of rod-shaped nanomotors and passive tracer particles. Proc. Natl. Acad. Sci. USA 110:17744-17749.

Wang, W., T.-Y. Chiang, D. Velegol, and **T. E. Mallouk**. Understanding the efficiency of autonomous nano- and microscale motors. J. Am. Chem. Soc. 135:10557-10565.

Elias, A. L., N. Perea-Lopez, A. Castro-Beltran, Y. Berkdemir, R. Lv, S. Feng, A. Long, T. Hayashi, Y. A. Kim, M. Endo, H. Gutierrez, N. Pradhan, L. Balicas, **T. Mallouk**, F. Lopez-Urias, H. Terrones, and M. Terrones. Controlled synthesis and transfer of large area WS_2 sheets: from single-layer to few-layers. ACS Nano 7:5235-5242.

Kovtyukhova, N. I., Y. Wang, R. Lv, M. Terrones, V. H. Crespi, and **T. E. Mallouk**. Reversible intercalation of hexagonal boron nitride with Bronsted acids. J. Am. Chem. Soc. 135:8372-8381.

Hall, A. S., S. A. Friesen, and **T. E. Mallouk**. Wafer-scale fabrication of plasmonic crystals from patterned silicon templates prepared by nanosphere lithography. Nano Lett. 13:2623-2627.

Hall, A. S., M. Faryad, G. D. Barber, L. Liu, T. S. Mayer, A. Lakhtakia, and **T. E. Mallouk**. Broadband light absorption with multiple surface plasmon polariton waves excited at the interface of a metallic grating and photonic crystal. ACS Nano 7:4995-5007.

Chen, Y., X. Ding, S.-C. S. Lin, S. Yang, P.-H. Huang, N. Nama, Y. Zhao, A. A. Nawaz, F. Guo, W. Wang, **T. E. Mallouk**, and T. J. Huang. Tunable nanowire patterning using standing surface acoustic waves (SSAW). ACS Nano 7:3306-3314.

Larrabee, T. J., **T. E. Mallouk**, and D. L. Allara. An atomic layer deposition reactor with dose quantification for precursor adsorption and reactivity studies. Rev. Sci. Instrum. 84:014102.

Mallouk, T. E. Water electrolysis: divide and conquer. Nature Chem. 5:362-363.

Bezinover, D., A. Kadry, T. Uemura, M. Sharghi, **A. M. Mastro**, D. M. Sosnoski, P. Dalal, and P. K. Janicki. Association between plasma cyclic guanosine monophosphate levels and hemodynamic instability during liver transplantation. Liver Transpl. 19:191-198.

Kraemer, W. J., M. S. Fragala, W. R. van Henegouwen, S. E. Gordon, J. A. Bush, J. S. Volek, N. T. Triplett, C. Dunn-Lewis, B. A. Comstock, T. K. Szivak, S. D. Flanagan, D. R. Hooper, H. Y. Luk, and **A. M. Mastro**. Responses of proenkephalin Peptide F to aerobic exercise stress in the plasma and white blood cell biocompartments. Peptides 42:118-124.

Chen, Y. C., K. S. Prabhu, A. Das, and **A. M. Mastro**. Dietary selenium supplementation modifies breast tumor growth and metastasis. Int. J. Cancer 133:2054-2064.

Chen, Y. C., K. S. Probhu, and **A. M. Mastro**. Is selenium a potential treatment for cancer metastasis? Nutrients 5:1149-1168.

Kim, S., **P. Medvedev**, T. Paton, and V. Bafna. Reprever: resolving low-copy duplicated sequences using template driven assembly. Nucl. Acids Res. 41:e128.

Golan, D. and **P. Medvedev**. Using state machines to model the IonTorrent sequencing process and improve read error-rates. Bioinformatics 29:i344-i351.

Koch, E. J., **T. Miyashiro**, M. J. McFall-Ngai, and E. G. Rudy. Features governing symbiont persistence in the squid-vibrio association. Mol. Ecol. doi: 10.111/mec.12474.

Verma, S. C. and **T. Miyashiro**. Quorum sensing in the squid-vibrio symbiosis. Int. J. Mol. Sci. 14:16386-16401.

Sun, Y., E. E. Bernardy, B. K. Hammer, and **T. Miyashiro**. Competence and natural transformation in vibrios. Mol. Microbiol. 89:583-595.

Paramita Sarkar, P., A. A. Sardesai, **K. S. Murakami**, and D. Chatterji. Catalytic inactivation of the bacterial RNA polymerase due to acquisition of secondary structure by the ω subunit. J. Biol. Chem. 288:25076-25087.

Molodtsov, V., I. N. Nawarathne, N. T. Scharf, P. D. Kirchhoff, H. D. H. Showalter, G. A. Garcia, and **K. S. Murakami**. X-ray crystal structures of the *Escherichia coli* RNA polymerase in complex with Benzoxazinorifamycins. J. Medicinal Chem. 56:4758-4763.

Mechold, U., K. Potrykus, H. Murphy, **K. S. Murakami**, and M. Cashel. Differential regulation by ppGpp versus pppGpp in *Escherichia coli*. Nucl. Acids Res. 41:6175-6189.

Murakami, K. S. The X-ray crystal structure of *Escherichia coli* RNA polymerase Sigma^{70} Holoenzyme. J. Biol. Chem. 288:9126-9134.

Basu, R.S. and **K. S. Murakami**. Watching the bacteriophage N4 RNA polymerase transcription by time-dependent soak-trigger-freeze X-ray crystallography. J. Biol. Chem. 288: 3305-3311.

Murakami, K. S. Targeting multidrug resistance in tuberculosis treatment. In: International Innovation, November 2013. pp.88-90, Research Media Ltd., Bristol, UK.

Trakselis, M.A. and **K. S. Murakami**. Chapter 1. Introduction to Nucleic Acid Polymerases: Families, Themes, and Mechanisms. In: Nucleic Acid Polymerases in Nucleic Acids and Molecular Biology series, Vol. 30, pp. 1-15, Springer.

Basu, R. S. and **K. S. Murakami**. Chapter 10. Bacteriophage RNA Polymerases. In: Nucleic Acid Polymerases in Nucleic Acids and Molecular Biology series, Vol. 30, pp.237-250, Springer.

Mwangi, M. M., C. Kim, M. Chung, J. Tsai, G. Vijayadamodar, M. Benitez, T. P. Jarvie, L. Du, and A. Tomasz. Whole-genome sequencing reveals a link between β-lactam resistance and synthetases of the alarmone (p)ppGpp in *Staphylococcus aureus*. Microb. Drug Resist. 19:153-159.

Zhang, Q., Y. Yoon, Y. Yu, E. J. Parnell, J. A. R. Garay, **M. M. Mwangi**, F. R. Cross, D. J. Stillman, and L. Bai. Stochastic expression and epigenetic memory at the yeast HO promoter. Proc. Natl. Acad. Sci. USA 110:14012-14017.

Kim, C., **M. Mwangi**, M. Chung, C. Milheiriço, H. de Lencastre, and A. Tomasz. The mechanism of heterogeneous beta-lactam resistance in MRSA: key role of the stringent stress response. PLOS ONE 8:e.82814.

Sandve, G. K., **A. Nekrutenko**, J. Taylor, and E. Hovig. Ten simple rules for reproducible computational research. PLOS Comput. Biol. 9:e1003285.

Bar-Yaacov, D., G. Avital, L. Levin, A. L. Richards, N. Hachen, B. Rebolledo Jaramillo, **A. Nekrutenko**, R. Zarivach, and D. Mishmar. RNA-DNA differences in human mitochondria restore ancestral form of 16S ribosomal RNA. Genome Res. 23:1789-1796.

Goecks, J., C. Eberhard, T. Too, Galazy Team, **A. Nekrutenko**, and J. Taylor. Web-based visual analysis for high-throughput genomics. BMC Genomics 14:397.

Sysoeva, T. A., S. Chowdhury, L. Guo, and **B. T. Nixon**. Nucleotide-induced asymmetry within ATPase activator ring drives s54-RNAP interaction and ATP hydrolysis. Genes & Dev. 15: 2500-2511.

Sysoeva, T. A., N. Yennawar, M. Allaire, and **B. T. Nixon**. Crystallization and preliminary X-ray analysis of the ATPase domain of the sigma54-dependent transcription activator NtrC1 from *Aquifex aeolicus* bound to ATP analog ADP-BeF_x. Acta Cryst. F69:1384-1388.

Baker, K. R. and **K. Postle**. Mutations in the *Escherichia coli* ExbB transmembrane domains identify scaffolding and signal transduction functions and exclude participation in a proton pathway. J. Bacteriol. 195:2898-2911.

Bulathsinghala, C. M., B. Jana, K. R. Baker, and **K. Postle**. ExbB cytoplasmic loop deletions cause immediate, proton motive force-independent growth arrest. J. Bacteriol. 195:4580-4591.

Li, J., Y. Liu, H. S. Rhee, S. K. Ghosh, L. Bai, **B. F. Pugh**, and D. S. Gilmour. Kinetic competition between elongation rate and binding of NELF controls promoter-proximal pausing. Mol. Cell 50:711-722.

Nakahashi, H., K. R. Kwon, W. Resch, L. Vian, M. Dose, D. Stavreva, O. Hakim, N. Pruett, S. Nelson, A. Yamane, J. Qian, W. Dubois, S. Welsh, R. D. Phair, **B. F. Pugh**, V. Lobanenkov, G. L. Hager, and R. Casellas. A genome-wide map of CTCF multivalency redefines the CTCF code. Cell Rep. 3:1678-1689.

Pugh, B. F. Molecular biology: The ends justify the means. Nature 497:48-49.

Yen, K., V. Vinayachandran, and **B. F. Pugh**. Genome-wide structural integration of SWR-C and INO80 chromatin remodelers at +1 nucleosomes. Cell 154:1246-1256.

Venters, B. J. and **B. F. Pugh**. Genomic organization of human transcription initiation complexes. Nature 502:53-58.

Reese, J. C. Control of elongation by the Ccr4-Not complex. Biochim. Biophys. Acta 1829:127-133.

Bhargave, P. and **J. C. Reese**. Transcription by Odd-Pols. Biochim. Biophys. Acta 1829:249-250.

Moore, C. B., J. R. Wallace, D. J. Wolfe, A. T. Frase, S. A. Pendergrass, K. M. Weiss, and **M. D. Ritchie**. Low frequency variants, collapsed based on biological knowledge, uncover complexity of population stratification in 1000 Genomes Project Data. PLoS Genet. 9:e1003959.

Behr, E. R., **M. D. Ritchie**, T. Tanaka, S. Kääb, D. C. Crawford, P. Nicoletti, A. Floratos, M. F. Sinner, P. J. Kannankeril, A. A. Wilde, C. R. Bezzina, E. Schulze-Bahr, S. Zumhagen, P. Guicheney, N. H. Bishopric, V. Marshall, S. Shakir, C. Dalageorgou, S. Bevan, Y. Jamshidi, R. Bastiaenen, R. J. Myerburg, J. J. Schott, A. J. Camm, G. Steinbeck, K. Norris, R. B. Altman, N. P. Tatonetti, S. Jeffery, M. Kubo, Y. Nakamura, Y. Shen, A. L. George, Jr., and D. M. Roden. Genome wide analysis of drug-induced torsades de pointes: lack of common variants with large effect sizes. PLoS One 8:e78511.

Denny, J. C., L. Bastarache, **M. D. Ritchie**, R. J. Carroll, R. Zink, J. D. Mosley, J. R. Field, J. M. Pulley, A. H. Ramirez, E. Bowton, M. A. Basford, D. S. Carrell, P. L. Peissig, A. N. Kho, J. A. Pacheco, L. V. Rasmussen, D. R. Crosslin, P. K. Crane, J. Pathak, S. J. Bielinski, S. A. Pendergrass, H. Xu, L. A. Hindorff, R. Li, T. A. Manolio, C. G. Chute, R. L. Chisholm, E. B. Larson, G. P. Jarvik, M. H. Brilliant, C. A. McCarty, I. J. Kullo, J. L. Haines, D. C. Crawford, D. R. Masys, and D. M. Roden. Systematic comparison of phenome-wide association study of electronic medical record data and genome-wide association study data. Nat. Biotechnol. 31:1102-1111.

Wolfe, D., S. Dudek, **M. D. Ritchie,** and S. A. Pendergrass. Visualizing genomic information across chromosomes with PhenoGram. BioData Mining 6:18.

Gong, J., F. Schumacher, U. Lim, L. A. Hindorff, J. Haessler, S. Buyske, C. S. Carlson, S. Rosse, P. Bůžková, M. Fornage, M. Gross, N. Pankratz, J. S. Pankow, P. J. Schreiner, R. Cooper, G. Ehret, C. C. Gu, D. Houston, M. R. Irvin, R. Jackson, L. Kuller, B. Henderson, I. Cheng, L. Wilkens, M. Leppert, C. E. Lewis, R. Li, K. D. Nguyen, R. Goodloe, E. Farber-Eger, J. Boston, H. H. Dilks, **M. D. Ritchie,** J. Fowke, L. Pooler, M. Graff, L. Fernandez-Rhodes, B. Cochrane, E. Boerwinkle, C. Kooperberg, T. C. Matise, L. Le Marchand, D. C. Crawford, C. A. Haiman, K. E. North, and U. Peters. Fine mapping and identification of BMI Loci in African Americans. Am. J. Hum. Genet. 93:661-671.

Carlson, C. S., T. C. Matise, K. E. North, C. A. Haiman, M. D. Fesinmeyer, S. Buyske, F. R. Schumacher, U. Peters, N. Franceschini, **M. D. Ritchie**, D. J. Duggan, K. L. Spencer, L. Dumitrescu, C. B. Eaton, F. Thomas, A. Young, C. Carty, G. Heiss, L. Le Marchand, D. C. Crawford, L. A. Hindorff, and C. L. Kooperberg; PAGE Consortium. Generalization and dilution of association results from European GWAS in populations of non-European ancestry: the PAGE study. PLoS Biol. 11:e1001661.

Ritchie, M. D. Erratum to: The success of pharmacogenomics in moving genetic association studies from bench to bedside: study design and implementation of precision medicine in the post-GWAS era. Hum. Genet. 132:1437.

Hulgan, T., J. H. Stein, B. R. Cotter, D. G. Murdock, **M. D. Ritchie**, M. P. Dube, M. Gerschenson, D. W. Haas, F. J. Torriani for the AIDS Clinical Trials Group A5152s and DACS 252 Study Teams. Mitochondrial DNA variation and changes in adiponectin and endothelial function in HIV-infected adults after antiretroviral therapy initiation. AIDS Res. Hum. Retroviruses 29:1293-1299.

Moore, C. B., J. R. Wallace, A. T. Frase, S. A. Pendergrass, and **M. D. Ritchie**. BioBin: A bioinformatics tool for automating the binning of rare variants using publicly available biological knowledge. BMC Med. Genomics 6(Suppl 2):S6.

McDavid, A., P. Crane, K. M. Newton, D. Crosslin, W. McCormik, N. Weston, K. Ehrlich, E. Hart, R. Harrison, W. A. Kukull, C. Rottscheit, P. Peissing, E. Stefanski, C. A. McCartha, R. L. Suvich, **M. D. Ritchie**, G. Schellenberg, M. deAndrade, I. Kullo, R. Li, D. Mirel, A. Crenshaw, J. D. Bowed, G. Li, D. Tsuang, S. McCurry, L. Teri, E. Larson, G. P. Jarvik, and C. S. Carlson. Enhancing the power of genetic association studies through the use of silver standard cases derived from electronic medical records. PLoS ONE 8:e63481.

Spencer, K., J. Malinowski, C. L. Carty, N. Franceschini, L. Fernández-Rhodes, A. Young, I. Cheng, **M. D. Ritchie**, C. A. Haiman, L. Wilkens, ChunyuanWu, T. C. Matise, C. S. Carlson, K. Brennan, A. Park, A. Rajkovic, L. A. Hindorff, S. Buyske, and C. C. Crawford. Genetic variation and reproductive timing: African American women from the Population Architecture using Genomics and Epidemiology (PAGE) Study. PLoS ONE 8:e55258.

Girirajan, S., R. L. Johnson, F. Tassone, J. Balciuniene, N. Katiyar, K. Fox, C. Baker, A. Srikanth, K-H Yeoh, S. J. Khoo, T. B. Nauth, R. Hansen, **M. D. Ritchie**, I. Hertz-Picciotto, E. E. Eichler, I. N. Pessah, and S. B. Selleck. Global increases in both common and rare copy number load associated with autism. Hum. Mol. Genet. 22:2870-2880.

Zhang, L., P. Buzkova, C. L. Wassel, M. J. Roman, K. E. North, D. C. Crawford, J. Boston, K. D. Brown-Gentry, S. A. Cole, E. Deelman, R. Goodloe, S. Wilson, G. Heiss, N. S. Jenny, N. W. Jorgensen, T. C. Matise, B. E. McClellan, Jr., A. Q. Nato, Jr., **M. D. Ritchie**, N. Franceschini, and W. H. L. Kao. Lack of associations of ten candidate coronary heart disease risk genetic variants and subclinical atherosclerosis in four U.S. populations: The Population Architecture using Genomics and Epidemiology (PAGE) study. Atherosclerosis 228:390-399.

Oetjens, M. T., J. C. Denny, **M. D. Ritchie**, N. B. Gillani, D. M. Richardson, N. A. Restrepo, J. M. Pulley, H. H. Dilks, M. A. Basford, E. Bowton, D. R. Masys, R. A. Wilke, D. M. Roden, and D. C. Crawford. Assessment of a pharmacogenomic marker panel in a polypharmacy population identified from electronic medical records. Pharmacogenomics 14:735-744.

Ding, K., M. de Andrade, T. A. Manolio, D. C. Crawford, L. J. Rasmussen-Torvik, **M. D. Ritchie**, J. C. Denny, D. R. Masys, H. Jouni, J. A. Pacheco, A. N. Kho, D. M. Roden, R. Chisholm, and I. J. Kullo. Genetic variants that confer resistance to malaria are associated with red blood cell traits in African-Americans: an electronic medical record-based genome-wide association study. G3 (Bethesda) 3:1061-1068.

Jeff, J. M., **M. D. Ritchie**, J. C. Denny, A. N. Kho, A. H. Ramirez, D. Crosslin, L. Armstrong, M. A. Basford, W. A. Wolf, J. A. Pacheco, R. L. Chisholm, D. M. Roden, G. Hayes, and D. C. Crawford. Generalization of variants identified by genome-wide association studies for ECG traits in African Americans. Ann. Hum. Genet. 77:321-332.

Park, S. L., I. Cheng, S. A. Pendergrass, A. M. Kucharska-Newton, U. Lim, J. L. Ambite, C. P. Caberto, K. R. Monroe, F. Schumacher, L. A. Hindorff, M. T. Oetjens, S. Wilson, R. J. Goodloe, S. A. Love, B. E. Henderson, L. N. Kolonel, C. A. Haiman, D. C. Crawford, K. E. North, G. Heiss, **M. D. Ritchie**, L. R. Wilkens, and L. Le Marchand. Association of the FTO obesity risk variant rs8050136 with percent energy intake from fat in multiple ethnic/racial populations: The PAGE Study. Am. J. Epidemiol. 178:780-790.

McGeachie, M. J., E. A. Stahl, B. E. Himes, S. A. Pendergrass, J. J. Lima, C. G. Irvin, S. P. Peters, **M. D. Ritchie**, R. M. Plenge, and K. G. Tantisira. Polygenic heritability estimates in pharmacogenetics: focus on asthma and related phenotypes. Pharmacogenet. Genom. 23:324-328.

Ritchie, M. D., J. C. Deny, R. L. Zuvich, D. C. Crawford, J. S. Schildcrout, L. Bastarache, A. H. Ramirez, J. D. Mosley, J. M. Pulley, M. A. Basford, Y. Bradford, L. V. Rasmussen, J. Pathak, C. G. Chute, I. J. Kullo, C. McCarty, R. L. Chisholm, A. N. Kho, C. S. Carlson, E. B. Larson, G. P. Jarvik, N. Sotoodehnia, T. A. Manolio, R. Li, D. R. Masys, J. L. Haines, and D. M. Roden. Genome- and phenome-wide analysis of cardiac conduction identifies markers of arrhythmia risk. Circulation 127:1377-1385.

Holzinger, E. R., S. M. Dudek, A. T. Frase, R. M. Kraus, M. W. Medina, and **M. D. Ritchie**. ATHENA: A tool for meta-dimensional analysis applied to genotypes and gene expression data to predict HDL cholesterol levels. Pac. Symp. Biocomput. 18:385-396.

Bush, W. S., J. Boston, S. A. Pendergrass, L. Dumitrescu, R. Goodloe, K. Brown-Gentry, S. Wilson, R. McClellan, Jr., E. Torstenson, M. A. Basford, K. L. Spencer, **M. D. Ritchie**, and D. C. Crawford. Enabling high-throughput genotype-phenotype associations in the epidemiologic architecture for genes linked to environment (EAGLE) project as part of the Population Architecture Using Genomics and Epidemiology (PAGE) Study. Pac. Symp. Biocomput. 18:373-384.

Moore, C. B., J. R. Wallace, A. T. Frase, S. A. Pendergrass, and **M. D. Ritchie**. Using BioBin to explore rare variant population stratification. Pac. Symp. Biocomput. 18:332-343.

Crawford, D. C., R. Goodloe, K. Brown-Gentry, S. Wilson, J. Roberson, N. B. Gillani, **M. D. Ritchie**, H. H. Dilks, and W. S. Bush. Characterization of the metabochip in diverse populations from the international HapMap project in the Epidemiologic Architecture for Genes Linked to Environment (EAGLE) Project. Pac. Symp. Biocomput. 18:188-199.

Pendergrass, S. A., S. S. Verma, E. R. Holzinger, C. B. Moore, J. R. Wallace, S. M. Dudek, W. Huggins, T. Kitchner, C. Waudby, R. Berg, C. A. McCarty, and **M. D. Ritchie**. Next-generation analysis of cataracts: determining knowledge driven gene-gene interactions using biofilter, and gene-environment interactions using the PhenX toolkit. Pac. Symp. Biocomput. 18:147-158.

Zhou, K., **M. M. Rolls**, and W. Hanna-Rose. A postmitotic function and distinct localization mechanism for centralspindlin at a stable intercellular bridge. Dev. Biol. 376:13-22.

Heister, K. G. and **L. C. Santy**. The cytohesin coiled-coil domain interacts with threonine 276 to control membrane association. PloS ONE 8:e82084.

Attar, M. A. and **L. C. Santy**. The scaffolding protein GRASP/Tamalin directly binds to Dock180 as well as to cytohesins facilitating GTPase crosstalk in epithelial cell migration. BMC Cell Biol. 14:9.

Girirajan, S., R. L. Johnson, F. Tassone, J. Balciuniene, N. Katiyar, K. Fox, C. Baker, A. Srikanth, K-H Yeoh, S. J. Khoo, T. B. Nauth, R. Hansen, M. D. Ritchie, I. Hertz-Picciotto, E. E. Eichler, I. N. Pessah, and **S. B. Selleck**. Global increases in both common and rare copy number load associated with autism. Hum. Mol. Genet. 22:2870-2880.

Huang, J. and **S. Tan**. *Piccolo* NuA4-catalyzed acetylation of nucleosomal histones: critical roles of an esa1 tudor/chromo barrel loop and an Epl1 enhancer of Polycomb A (EPcA) basic region. Mol. Cell. Biol. 33:159-169.

Wu, L., S. Y. Lee, B. Zhou, U. T. Nguyen, T. Muir, **S. Tan**, and Y. Dou. ASH2L regulates ubiquitylation signaling to MLL: trans-regulation of H3 K4 methylation in higher eukaryotes. Mol. Cell 49:1108-1120.

Makde, R. and **S. Tan**. Strategies for crystallizing a chromatin protein in complex with the nucleosome core particle. Anal. Biochem. 442:138-145.

Tan, S. and K. Nagai. Protein-nucleic interactions, 'I have a cunning plan...', Curr. Opin. Struct. Biol. 23:90-92.

Bansal, R., R. A. Helmus, B. A. Stanley, J. Zhu, L. J. Liermann, S. L. Brantley, and **M. Tien**. Survival during long-term starvation: global proteomics analysis of Geobacter sulfurreducens under prolonged electron-acceptor limitation. J. Proteome Res. 12:4316-4326.

Cong, F., B. G. Diehl, J. L. Hill, N. R. Brown, and **M. Tien**. Covalent bond formation between amino acids and lignin: Cross -coupling between proteins and lignin. Phytochemistry 96:449-456.

Deng, Y., N. Nagachar, C. Xiao, **M. Tien**, and T-h. Kao. Identification and characterization of non-cellulose-producing mutants of *Gluconacetobacter hansenii* generated by Tn5 transposon mutagenesis. J. Bacteriol. 195:5072-5083.

Guo, J., J. M. Catchmark, M. N. A. Mohamed, A. J. Benesi, **M. Tien**, T-h. Kao, H. D. Watts, and J. D. Kubicki. Identification and characterization of a cellulose binding heptapeptide revealed by phage display. Biomacromolecules 14:1795-1805.

Iyer, P. R., Y.-A. Liu, Y. Deng, J. B. McManus, T-h. Kao, and **M. Tien**. Processing of cellulose synthase (AcsAB) from *Gluconacetobacter hansenii* 23769. Arch. Biochem. Biophys. 529:92-98.

Ofori-Sarpong, G., K. Osseo-Asare, and **M. Tien**. Mycohydrometallurgy: Biotransformation of double refractory gold ores by the fungus, Phanerochaete chrysosporium. Hydrometallurgy 137:38-44.

Salvachua, D., A. T. Martinez, **M. Tien**, M. F. Lopez-Lucendo, F. Garcia, V. de los Rios, M. Jesus Martinez, and A. Prieto. Differential proteomic analysis of the secretome of Irpex lacteus and other white-rot fungi during wheat straw pretreatment. Biotech. Biofuels 6:115.

Scully, E. D., K. Hoover, J. E. Carlson, **M. Tien**, and S. M. Geib. Midgut transcriptome profiling of Anoplophora glabripennis, a lignocellulose degrading cerambycid beetle. BMC Genomics 14:850.

Xu, Y., C.-F. Chen, T. P. Thomas, P. Azadi, B. Diehl, C.-J. Tsai, N. Brown, J. E. Carlson, **M. Tien**, and H. Liang. Wood chemistry analysis and expression profiling of a poplar clone expressing a tyrosine-rich peptide. Plant Cell Rep. 32:1827-1841.

Wang, S. and **Y. Wang.** Peptidylarginine deiminases in citrullination, gene regulation, health and pathogenesis. Biochim. Biophys. Acta. 1829:1126-1135.

Hu, J. and **Y. Wang**. p53 and the PWWP domain containing effector proteins in chromatin damage repair. Cell Dev. Biol. 2:112.

Martinod, K., M. Demers, T. A. Fuchs, S. L. Wong, A. Brill, M. Gallant, J. Hu, **Y. Wang**, and D. D. Wagner. Neutrophil histone modification by peptidylarginine deiminase 4 is critical for deep vein thrombosis. Proc. Natl. Acad. Sci. USA 110:8674-8679.

Zhu, H., Y. Wang, Y. Wang, S. Zhao, M. Zhao, L. Gui, W. Xu, S. A. Chen, **Y. Wang**, and S. Peng. Folded conformation, cyclic pentamer, nano-structure and PAD4 binding mode of YW3-56. J. Phys. Chem. C 117:10070-10078.

Soo, V. W. S. and **T. K. Wood**. Antitoxin MqsA represses curli formation through the master biofilm regulator CsgD. Scientific Reports 3:3186.

Wood, T. K., S. J. Knabel, and B. W. Kwan. Bacterial persister cell formation and dormancy. Appl. Environ. Microbiol. 79:7116-7121.

Kwan, B. W., J. A. Valenta, M. J. Benedik, and **T. K. Wood**. Arrested protein synthesis increases persister-like cell formation. Antimicrob. Agents Chemother. 57:1468-1473.

Wang, X., D. M. Lord, S. H. Hong, W. Peti, M. J. Benedik, R. Page, and **T. K. Wood**. Type II toxin/antitoxin MqsR/MqsA controls Type V toxin/antitoxin GhoT/GhoS. Environ. Microbiol. 15:1734-1744.

Zheng, L., T. Crippen, L. Holmes, B. Singh, M. L. Pimsler, E. Benbow, A. M. Tarone, S. Dowd, Z. Yu, S. L. Vanlaerhoven, **T. K. Wood**, and J. K. Tomberlin. Bacteria mediate oviposition by the black soldier fly, Hermetia illucens (L.), (Dipteria: Stratiomyidae). Scientific Reports 3:2563.

Zheng, L., T. L. Crippen, B. Singh, A. M. Tarone, S. Dowd, Z. Yu , **T. K. Wood**, and J. K. Tomberlin. A survey of bacterial diversity from successive life stages of black soldier fly (Diptera: Stratiomyidae) by using 16S rDNA pyrosequencing. J. Med. Entomol. 50:647-658.

Koveal, D., M. W. Clarkson, **T. K. Wood**, R. Page, and W. Peti. Ligand binding reduces conformational flexibility in the active site of tyrosine phosphatase related to biofilm formation A (TpbA) from *Pseudomonas aeruginosa*. J. Molec. Biol. 425:2219-2231.

Xu, Z., X. Fang, **T. K. Wood**, and Z. J. Huang. A systems-level approach for investigating *Pseudomonas aeruginosa* biofilm formation. PLoS ONE 8:e57050.

Kalia, V. C., **T. K. Wood**, and P. Kumar. Evolution of resistance to quorum-sensing inhibitors. Microb. Ecol. doi 10.1007/s00248-013-0316-y.

García-Contreras, R., T. Maeda, and **T. K. Wood**. Resistance to quorum quenching compounds. App. Environ. Microbiol. 79:6840-6846.

García-Contreras, R., E. Lira-Silva, R. Jasso-Chávez, I. L Hernández-González, T. Maeda, T. Hashimoto, F. C. Boogerd, L. Sheng, **T. K. Wood**, and R. Moreno-Sánchez. Isolation and characterization of Gallium resistant Pseudomonas aeruginosa mutants. Int. J. Med. Microbiol. 303:574-582.

García-Contreras, R., M. Martínez-Vázquez, A. Guadalupe Villegas Pañeda, T. Hashimoto, T. Maeda, H. Quezada, **T. K. Wood**, and N. Velázquez. Resistance to the quorum quenching compounds brominated furanone C-30 and 5-fluorouracil in *Pseudomonas aeruginosa* clinical isolates. Pathogens and Disease 68:8-11.

Maeda, T., M. Z. Mohd Yusoff, Y. Hashiguchi, and **T. K. Wood**. Four products from *Escherichia coli* pseudogenes increase hydrogen production. Biochem. Biophys. Res. Commun. 439:576-579.

Mohd Yasin, N. H., M. Fukuzaki, T. Maeda, T. Miyazaki, Ch. M. Mohd Hakiman Che Maail, H. Ariffin, and **T. K. Wood**. Biohydrogen production from oil palm frond juice and sewage sludge by a metabolically engineered *Escherichia coli* strain. Int. J. Hydrogen Energy 38:10277-10283.

McAnulty, M. J., V. R. Vepachedu, **T. K. Wood**, and J. G. Ferry. Biofuels: microbially generated methane and hydrogen. In: eLS. John Wiley & Sons Ltd, Chichester, England. http://www.els.net [doi: 10.1002/9780470015902.a0020375].

Sanchez-Torres, V., M. Z. M. Yusoff, C. Nakano, T. Maeda, H. I. Ogawa, and **T. K. Wood**. Influence of Escherichia coli hydrogenases on hydrogen fermentation from glycerol. Int. J. Hydrogen Energy 38:3905-3912.

Zhu, H., X. Yi, Y. Liu, H. Hu, **T. K. Wood**, and X. Zhang. Production of acetol from glycerol using engineered Escherichia coli. Bioresour. Technol. 149:238-243.

Wood, T. K. Precedence for the structural role of flagella in biofilms. mBio 4:e00225-13.

Kim, J., **H. P. Yennawar**, and B. J. Lear. Synthesis and characterization of ruthenium polypyridyl complexes with hydroxypyridine derivatives: effect of protonation and ethylation at the pyridyl nitrogen. Dalton Trans. 42:15656-15662.

De Rosa, M., N. Canudas, D. Arnold, and **H. Yennawar**. Chlorotropy of 1-chlorobenzimidazole. J. Org. Chem. 78:7264-7267.

Yennawar, H. P., L. J. Silverberg, M. J. Minehan, and J. Tierney. 2-(3-Nitrophenyl)-3-phenyl-2, 3-dihydro-4H-1, 3-benzothiazin-4-one. Acta Cryst. E 69:o1679-o1679.

Yennawar, H. P. and L. J. Silvergert. 6, 7-Diphenyl-5-thia-7-azaspiro [2.6] nonan-8-one. Acta Cryst E 69:o1659-o1659.