

Biochemistry and Biophysics 2010 Publications

Ahern, Kevin

Educational Songs

Ahern, K. (2010) "Catalyze" *Biochem. Mol. Biol. Educ.* **38**, 335.

Ahern, K. (2010) "Photosynthesis is Divine" *Biochem. Mol. Biol. Educ.*, **38**, 58.

Ahern, K. (2010) "Web Watch", *Biotechniques* **48**, #5, in press.

Ahern, K. (2010) "Web Watch", *Biotechniques* **48**, #4, 265.

Ahern, K. (2010) "Web Watch", *Biotechniques* **48**, #3, 183.

Ahern, K. (2010) "Web Watch", *Biotechniques* **48**, #2, 93.

Ahern, K. (2010) "Web Watch", *Biotechniques* **48**, #1, 23.

Ahern, K. (2010) "Web Watch", *Biotechniques* **47**, #6, 1003.

Ahern, K. (2010) "Web Watch", *Biotechniques* **47**, #5, 909.

Ahern, K. (2010) "Web Watch", *Biotechniques* **47**, #4, 815.

Ahern, K. (2010) "Web Watch", *Biotechniques* **47**, #3, 725.

Ahern, K. (2010) "Web Watch", *Biotechniques* **47**, #2, 657.

Ahern, K. (2010) "Web Watch", *Biotechniques* **47**, #1, 577.

Baird, William

Luch, A. and Baird, W.M. (2010) Carcinogenic Polycyclic Aromatic Hydrocarbons. In: Charlene A. McQueen, *Comprehensive Toxicology Vol14* pp85-123 Oxford: Academic Press.

Barbar, Elisar

Hall, J., Song, Y., Karplus, P.A. and Barbar, E. (2010) The crystal structure of dynein intermediate chain-light chain roadblock complex gives new insights into dynein assembly. *J. Biol. Chem.* **285**, 22566-22575.

Nyarko, A. and Barbar, E. (2010) Light chain dependent self-association of dynein intermediate chain. *J. Biol. Chem.* Oct 25. [Epub ahead of print]

Frei, Balz

Bowman, G.L., Shannon, J., Frei, B., Kaye, J.A. and Quinn, J.F. (2010) Uric acid as a central nervous system antioxidant. *J. Alzheimers Dis.* **19**, 1331-1336.

- Zhang, W.J., Wei, H. and Frei, B. (2010) The iron chelator, desferrioxamine, reduces inflammation and atherosclerotic lesion development in experimental mice. *Exp. Biol. Med.* **235**, 633-641.
- Li, L., Smith, A., Hagen, T.M. and Frei, B. (2010) Vascular oxidative stress and inflammation increase with age: Ameliorating effects of α -lipoic acid supplementation. *Ann. N.Y. Acad. Sci.* **1203**, 151-159.
- Traber, M.G. and Frei, B. (2010) Micronutrient concentrations and subclinical atherosclerosis in adults with HIV. *Am. J. Clin. Nutr.* **92**, 266-267. PubMed PMID: 20463044.
- Wu, R., Frei, B., Kennedy, J.A. and Zhao, Y. (2010) Effects of refrigerated storage and processing technologies on the bioactive compounds and antioxidant capacities of 'Marion' and 'Evergreen' blackberries. *Food Science and Technology* **43**, 1253-1264.
- Michels, A.J., Hagen, T.M. and Frei, B. (2010) A new twist on an old vitamin: human polymorphisms in the gene encoding the sodium-dependent vitamin C transporter 1. *Am. J. Clin. Nutr.* **92**, 271-272.
- Drake, V.J. and Frei, B. (2010) Vitamin C in human disease prevention. In: *Vitamins and Vitamin-Like Nutrients for Prevention of Human Diseases* (Obeid, R. and Herrmann, W., eds), Walter de Gruyter, Berlin, Germany, in press.
- Bowman, G.L., Shannon, J., Ho, E., Traber, M.G., Frei, B., Oken, B.S., Kaye, J.A. and Quinn, J.F. (2010) Reliability and validity of plasma nutrients and food frequency questionnaire estimates in elders with and without mild cognitive impairment. *Alzheimer. Dis. Assoc. Disord.* Nov 3. [Epub ahead of print]
- Zhu, B.Z., Zhang, Y.N., Wang, J. and Frei, B. (2010) Ergothioneine prevents copper-induced oxidative damage to DNA and protein by formation of a redox-inactive ergothioneine-copper complex. *Chem. Res. Toxicol.* Nov 3. [Epub ahead of print]

Freitag, Michael

- Smith, K.M., Sancar, G., Dekhang, R., Sullivan, C.M., Li, S., Tag, A.G., Sancar, C., Bredeweg, E.L., Priest, H.D., McCormick, R.F., Thomas, T.L., Carrington, J.C., Stajich, J.E., Bell-Pedersen, D., Brunner, M. and Freitag, M. (2010) Transcription factors in light and circadian clock signaling networks revealed by genomewide mapping of direct targets for Neurospora white collar complex. *Eukaryotic Cell* **9**, 1549-1556.
- Lee, H-C., Li, L., Gu, W., Xue, Z., Crosthwaite, S.K., Lewis, Z.A., Freitag, M., Selker, E.U., Mello, C. and Liu, Y. (2010). Origin and biogenesis of microRNAs and dicer-independent small interfering RNAs: Multiple mechanisms for small RNA production in fungi. *Molecular Cell* **38**, 1-12, (doi:10.1016/j.molcel.2010.04.005).

Ma, L.-J., van der Does, H.C., Borkovich, K.A., Coleman, J.J., Daboussi, M.-J., Di Pietro, A., Dufresne, M., Freitag, M., Grabherr, M., Henrissat, B., Houterman, P.M., Shim, W.-B., Woloshuk, C., Xie, X., Xu, J.-R., Antoniw, J., Baker, S.E., Bluhm, B.H., Breakspear, A., Brown, D.W., Butchko, R.A.E., Chapman, S., Coulson, R., Coutinho, P.M., Danchin, E.G.J., Diener, A., Gale, L.R., Gardiner, D.M., Goff, S., Hammond-Kosack, K.E., Hilburn, K., Hua-Van, A., Jonkers, W., Kazan, K., Kodira, C.D., Koehrsen, M., Kumar, L., Lee, Y.-H., Li, L., Manners, J.M., Miranda-Saavedra, D., Mukherjee, M., Park, G., Park, J., Park, S.-Y., Proctor, R., Regev, A., Ruiz-Roldan, M.C., Sain, D., Sakthikumar, S., Sykes, S., Schwartz, D.C., Turgeon, G., Wapinski, I., Yoder, O., Young, S., Zeng, Q., Zhou, S., Galagan, J., Cuomo, C.A., Kistler, H.C. and Rep, M. (2010) Comparative genomics reveals mobile pathogenicity chromosomes in *Fusarium oxysporum*. *Nature* **464**, 367-373.

Nowrousian, M., Stajich, J., Engh, I., Espagne, E., Kamerewerd, J., Kempken, F., Kuo, H.-C., Osiewacz, H.D., Pöggeler, S., Read, N., Seiler, S., Smith, K.M., Zickler, D., Kück, U. and Freitag, M. (2010) Next-generation sequencing of the 40 Mb genome of the filamentous fungus *Sordaria macrospora*. *PLoS Genetics* **6**, e1000891.

Roca, M.G., Kuo, H.-C., Lichius, A., Freitag, M. and Read, N.D. (2010) Nuclear dynamics and mitosis during the early stages of colony establishment in *Neurospora crassa*. *Eukaryotic Cell* **9**, 1171-1183 (online 12 March 2010, doi:10.1128/EC.00329-09). Cover image (August 2010).

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Gombart, Fritz

Akagi, T., Thoennissen, N.H., George, A., Crooks, G., Song, J.H., Okamoto, R., Nowak, D., Gombart, A.F. and Koeffler, H.P. (2010) In vivo deficiency of both C/EBP β and C/EBP ϵ results in highly defective myeloid differentiation and lack of cytokine response. *PLoS One* Nov 3;5(11):e15419.

Greenwood, Jeffrey

Jang, H.S., Lal, S. and Greenwood, J.A. (2010) Calpain 2 is required for glioblastoma cell invasion: regulation of matrix metalloproteinase 2. *Neurochem. Res.* **35**, 1796-1804.

Hagen, Tory

Monette, J.S., Gómez, L.A., Moreau, R.F., Dunn, K.C., Butler, J.A., Finlay, L.A., Michels, A.J., Shay, K.P., Smith, E.J. and Hagen, T.M. (2010) (R)- α -Lipoic acid treatment restores ceramide balance in aging rat cardiac mitochondria. *Pharmacol. Res.*, in press.

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Widlansky, M.E., Wang, J., Shenouda, S.M., Hagen, T.M., Smith, A.R., Kizhakekuttu, T.J., Kluge, M.A., Weihrauch, D., Gutterman, D.D. and Vita, J.A. (2010) Altered mitochondrial membrane potential, mass, and morphology in the mononuclear cells of humans with type 2 diabetes. *Transl. Res.* **156**, 15-25.

Monette, J.S., Gómez, L.A., Moreau, R.F., Bemmer, B.A., Taylor, A.W. and Hagen, T.M.. (2010) Characteristics of the rat cardiac sphingolipid pool in two mitochondrial subpopulations. *Biochem. Biophys. Res. Commun.* **398**, 272-277.

Michels AJ, Hagen, TM, and Frei B. (2010) A new twist on an old vitamin: human polymorphisms in the gene encoding the sodium-dependent vitamin C transporter 1. *Am J Clin Nutr* **92**, 271-272.

Monette, J.S., Gomez, L.A., Moreau, R., Bemmer, B.A., Taylor, A.W. and Hagen, T.M. (2010) Characteristics of the rat cardiac sphingolipid pool in two mitochondrial subpopulations. *Biochemical and Biophysical Research Communications* **398**, 272-277.

Karplus, P. Andrew

Berkholz, D.S., Krenesky, P.b., Davidson, J.R. and Karplus, P.A. (2010) Protein geometry database: A flexible engine to explore backbone conformations and their relationships with covalent geometry. *Nucleic Acids Res.* **38**, D320-325.

Hall, J., Karplus, P.A. and Barbar, E. (2010) The crystal structure of dynein intermediate chain-light chain roadblock complex gives new insights into dynein assembly. *J. Biol. Chem.* **285**, 22566-22575.

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Parsonage, D., Reeves, S.A., Karplus, P.A. and Poole, L.B. (2010) Engineering of fluorescent reporters into redox domains to monitor electron transfers. *Meth. Enzymol.* **474**, 1-21.

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Mathews, Chris

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Merrill, Gary

Rollins, M.F., van der Heide, D.M., Weisend, C.M., Kundert, J.A., Comstock, K.M., Suvorova, E.S., Capecchi, M.R., Merrill, G.F. and Schmidt, E.E. (2010) Hepatocytes lacking thioredoxin reductase 1 have normal replicative potential during development and regeneration. *J. Cell Sci.* **5**(123), 2402-2412. PMID: 20571049.

Moreau, Regis

Monette, J.S., Gomez, L.A., Moreau, R., Dunn, K.C., Butler, J.A., Finlay, L.A., Michels, A.J., Petersen Shay, K., Smith, E.J. and Hagen, T.M. (2010) (R)-a-Lipoic acid treatment restores ceramide balance in aging rat cardiac mitochondria. *Pharmacological Research*, in press.

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Zhang, Weijian

Zhang, W.J., Wei, H. and Frei, B. (2010) The iron chelator, desferrioxamine, reduces inflammation and atherosclerotic lesion development in experimental mice. *Exp. Biol. Med.* **235**, 633-641.

Program Graduate and Undergraduate Students with Affiliate Faculty

Hadduck, A.N., Hindagolla, V., Contreras, A., Li, Q., Bakalinsky, A.T. (2010) Does aqueous fullerene inhibit growth of yeast or *E. coli*? *Appl. Env. Micro.* **76**, 8239-8242.

Bollmann, S. R., **Tominey, C.M.**, Hoffman, P.D., Hoffman, T.M.C. and Hays, J.B. (2011) Reversion-reporter transgenes to analyze all six base-substitution pathways in arabidopsis. *Plant Physiology* **155**.

Furukawa, T., Curtis, M.J., **Tominey, C.M.**, Duong, Y.H., Wilcox, B.W.L., Aggoune, D., Hays, J.B. and Britt, A.B. (2010) A shared DNA-damage-response pathway for induction of stem-cell death by UVB and by gamma irradiation. *DNA Repair* **9**, 940-948.

Curtin, M.J., Belcram, K., Bollmann, S.R., **Tominey, C.M.**, Hoffman, P.D., Mercier, R. and Hays, J.B. (2009) Reciprocal chromosome translocation associated with TDNA-insertion mutation in Arabidopsis: genetic and cytological analyses of consequences for gametophyte development and for construction of doubly mutant lines. *Planta* **229**, 731-745.

Program Postdocs and Courtesy Faculty

Baase, W.A., Liu, L., **Tronrud, D.E.**, Matthews, B.W. (2010) Lessons from the lysozyme of phage T4. *Protein Sci.* **19**, 631-641.

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