

Since 1995

\*Helfand, S.L., Blake,K.J., Rogina, B., Stracks, M.D., Centurion, A. and Naprta, B. Temporal patterns of gene expression in the antenna of the adult *Drosophila melanogaster*. *Genetics* 1995; 140: 549-55.

Blake, K.J., Rogina, B., Centurion, A. and \*Helfand, S. L. Changes in gene expression during post-eclosional development in the olfactory system of *Drosophila melanogaster*. *Mechanisms of Development* 1995; 52: 179-85.

Rogina, B. and \*Helfand, S. L. Regulation of gene expression is linked to life span in the adult *Drosophila*. *Genetics* 1995; 141: 1043-48.

Blake, K. J., Hoopengardner, B., Centurion, A. and \*Helfand, S. L. A molecular marker shows that adult maturation is independent of the rate of pre-adult development in *Drosophila melanogaster*. *Developmental Genetics* 1996; 18: 125-30.

\*Helfand, S. L. and Naprta, B.. The expression of a reporter protein,  $\beta$ -galactosidase, is preserved during maturation and aging in some cells of the adult *Drosophila melanogaster*. *Mechanisms of Development* 1996; 55:45-51.

Rogina, B. and \*Helfand, S. L. Timing of expression of a gene in the adult *Drosophila* is regulated by mechanisms independent of temperature and metabolic rate. *Genetics* 1996; 143: 1643-51

Rogina, B. and \*Helfand, S. L. Spatial and temporal pattern of expression of the wingless and engrailed genes in the adult antenna is regulated by age-dependent mechanisms. *Mechanisms of Development* 1997; 63: 89-97.

Rogina, B., Benzer, S., and \*Helfand, S. L. *Drosophila* drop-dead mutations accelerate the time course of age-related markers. *Proc. Natl. Acad. Sci. (USA)* 1997; 94: 6303-6.

Rogina, B., Vaupel, J. W., Partridge, L., \*Helfand, S. L. Regulation of gene expression is preserved in aging *Drosophila melanogaster*. *Current Biology* 1998; 8: 475-8.

Rogina, B. and \*Helfand, S.L. Cu, Zn superoxide dismutase deficiency accelerates the time course of an age-related marker in *Drosophila melanogaster*. *Biogerontology* 2000; 1: 161-7.

Rogina, B. Reenan, R. A., Nilsen S. P. and \*Helfand, S. L. Extended life-span conferred by cotransporter gene mutations in *Drosophila*. *Science* 2000; 290: 2137-40.

Hoopengardner, B and \*Helfand, S. L. Temperature Compensation and Temporal Expression Mediated by an Enhancer Element in Drosophila. *Mechanisms of Development* 2002; 110: 27-37.

Knauf, F., Rogina, B., Jiang, Z., Aronson, P. A., and \*Helfand, S. L. Functional Characterization and Immunolocalization of the Novel Transporter Encoded by the Life-Extending Gene Indy. *Proc. Natl. Acad. Sci. (USA)* 2002; 99:14315-19.

Rogina, B., Helfand, S. L. and Frankel, S. Longevity regulation by Drosophila Rpd3 deacetylase and caloric restriction. *Science* 2002; 298: 1745.

Marden, J.H., Rogina, B., Montooth,K.L. and \*Helfand, S. L. Conditional tradeoffs between aging and organismal performance of Indy long-lived mutant flies. . *Proc. Natl. Acad. Sci. (USA)* 2003; 100: 3369-73.

Fridell, Y-W., Sánchez-Blanco, Silvia, B. A. and \*Helfand, S. L. Functional Characterization of a Drosophila Mitochondrial Uncoupling Protein. *Journal of Bioenergetics and Biomembranes* 2004; 36 (3): 219-28.

Woods, J, Rogina, B, Lavu, S., Howitz, K., \*Helfand, S. L, \*Tatar, M., and \*Sinclair, D. (2004) Sirtuin activators mimic calorie restriction and delay aging in metazoans. *Nature* 2004; 430 (7000): 686-9.

Bauer, J., Goupil, S., Garber, G., and \*Helfand, S. L. An accelerated assay for the identification of life span extending interventions in *Drosophila melanogaster*. *Proc. Natl. Acad. Sci. (USA)* 2004; 101:12980-85.

Rogina, B. and \*Helfand, S. L. Sir2 mediates longevity in the fly through a pathway related to calorie restriction. *Proc. Natl. Acad. Sci. (USA)* 2004; 101: 15998-6003.

Fridell, Y-W, Sanchez-Blanco, A., Silvia, B. and \*Helfand, S. L. Targeted Expression of the Human Uncoupling Protein 2 (hUCP2) to Adult Neurons Extends Life Span in the Fly. *Cell Metabolism* 2005; 1: 145-52.

Zheng, J-Y, Mutcherson, R, and \*Helfand, S. L. Calorie restriction delays lipid oxidative damage in *Drosophila melanogaster*. *Aging Cell* 2005; 4: 209-16.

Bross, TG, Rogina, B, and \*Helfand SL. (2005) Behavioral, physical, and demographic changes in *Drosophila* populations through dietary restriction. *Aging Cell*. 4: 309-17. (Cover picture)

Bauer JH, Poon PC, Glatt-Deeley H, Abrams JM, and \*Helfand S.L. (2005) Neuronal Expression of p53 Dominant-Negative Proteins in Adult *Drosophila melanogaster* Extends Life Span. *Curr Biol.* 15:2063-8.

Sanchez-Blanco A, Fridell YW, and \*Helfand SL (2006) Involvement of Drosophila Uncoupling Protein 5 in Metabolism and Aging. *Genetics* 172:1-12.

Knauf F, Mohebbi N, Teichert C, Herold D, Rogina B, Helfand SL, Gollasch M, Luft FC, and Aronson, PA. (2006) The life-extending gene Indy encodes an exchanger for Krebs-cycle intermediates. *Biochemical Journal* 397: 25-29.

Bauer JH, Chang C, Morris SNS, Hozier S, Andersen S, Waitzman JS, \*Helfand S.L. (2007) Expression of dominant-negative Dmp53 in the adult fly brain inhibits insulin signaling. *Proc. Natl. Acad. Sci. (USA)*, 14; 104(33):13355-60 Aug 8; [Epub ahead of print]

Bauer J.H., Morris SNS, Chang C, Flatt T, Wood JG and \*Helfand SL. (2009) dSir2 and Dmp53 interact to mediate aspects of CR-dependent life span extension in *D. melanogaster*. *Aging* 1: 38-48.

Neretti N, Wang PY, Brodsky AS, Nyguyen HH, White KP, Rogina B, \*Helfand SL. (2009) Long-lived Indy induces reduced mitochondrial reactive oxygen species production and oxidative damage. *Proc Natl Acad Sci U S A*. 2009 Jan 21. [Epub ahead of print]

Wang PY, Neretti N, Whitaker R, Hosier S, Chang C, Lu D, Rogina B, \*Helfand SL. (2009) Long-lived Indy and calorie restriction interact to extend life span. *Proc Natl Acad Sci U S A*. 2009 Jun 9;106(23):9262-7. Epub 2009 May 22.

Fridell, Y-W, Hoh, M, Krenesz, Orsolya, Hosier, S, Chengyi, C, Scantling D, Mulkey, D and \*Helfand SL. (2009) Increased Uncoupling Protein (UCP) activity in Drosophila Insulin-Producing neurons attenuates Insulin signaling and extends lifespan. *Aging* Jul 21;1(8):699-713.

Bauer JH, Chang C, Bae G, Morris SN, \*Helfand SL.(2010) Dominant-negative Dmp53 extends life span through the dTOR pathway in *D. melanogaster*. *Mech Ageing Dev.* 2010 Mar;131(3):193-201. Epub 2010 Feb 1.

Bauer, JH, Antosh, M., Chang, C., Schorl, C., Kolli, S., \*Neretti, \*Helfand S.L. Comparative transcriptional profiling identifies *takeout* as a gene that regulates life span. (2010) *Aging* May;2(5):298-310.PMID: 20519778

Wood JG, Hillenmeyer S, Lawrence C, Chang C, Hosier S, Lightfoot W, Mukherjee E, Jiang N, Schorl C, Brodsky AS, Neretti N, Helfand SL. (2010) Chromatin remodeling in the aging genome of Drosophila. *Aging Cell*. 2010 Dec;9(6):971-8. doi: 10.1111/j.1474-9726.2010.00624.x. Epub 2010 Oct 21.PMID: 20961390 [PubMed - in process]

Antosh M, Whitaker R, Kroll A, Hosier S, Chang C, Bauer J, Cooper L, Neretti N, Helfand SL. (2011) Comparative transcriptional pathway bioinformatic

analysis of dietary restriction, Sir2, p53 and resveratrol life span extension in *Drosophila*. *Cell Cycle*. 2011 Mar 15;10(6).

**non-refereed journal articles**

\*Helfand, S.L. and Inouye, S.K. Rejuvenating views of the aging process. *Nature Reviews Genetics* 2002, 3: 149-153.

\*Helfand, S. L. Chaperones Take Flight. *Science*, 2002, 295: 809-10.

\*Helfand, S. L. and Rogina, B. Molecular genetics of aging: Is this the end of the beginning? *BioEssays* 2003; 25: 134-41.

\*Helfand, S. L. and Rogina, B. Genetics of aging in the fruit fly, *Drosophila melanogaster*. *Annual Review of Genetics* 2003; 37: 329-48.

\*Helfand, S. L. and Inouye, S. L. Aging, life span, genetics and the fruit fly. *Clinical Neuroscience Research* 2003; 2: 270-278.

Butler, R. N., Austad, S. N., Barzilai, N., Braun, A., Helfand, S.L., Larsen, P. L., McCormick, A. M., Perls, T. T., Shuldiner, A. R., Sprott, R. L., and Warner, H. R. Longevity genes: from primitive organisms to humans. *J Gerontol A Biol Sci Med Sci*. 2003; 7: 581-4

Bauer, JH and \*Helfand, S. L. The humble fly: what a model system can reveal about the human biology of aging. (2006) *Rhode Island Medical Journal*, 89(9): 314-5.

Bauer, JH and \*Helfand, SL. (2006) New tricks of an old molecule: lifespan regulation by p53. *Aging Cell* 5: 437-40.

Bauer, JH and \*Helfand, SL. (2009) Sir2 and longevity: the p53 connection. *Cell Cycle*. Jun 15;8(12):1821. Epub 2009 Jun 15.

Blagosklonny MV, Campisi J, Sinclair DA, Bartke A, Blasco MA, Bonner WM, Bohr VA, Brosh RM Jr, Brunet A, Depinho RA, Donehower LA, Finch CE, Finkel T, Gorospe M, Gudkov AV, Hall MN, Hekimi S, Helfand SL, Karlseder J, Kenyon C, Kroemer G, Longo V, Nussenzweig A, Osiewacz HD, Peper DS, Rando TA, Rudolph KL, Sassone-Corsi P, Serrano M, Sharpless NE, Skulachev VP, Tilly JL, Tower J, Verdin E, Vijg J. “[Impact papers on aging in 2009](#).” (2010) *Aging* (Albany NY). 2010 Mar;2(3):111-21. Epub 2010 Mar 23. PMID: 20351400 [PubMed - in process]

Letters to Editor

Baur JA, Chen D, Chini EN, Chua K, Cohen HY, de Cabo R, Deng C, Dimmeler S, Gius D, Guarente LP, Helfand SL, Imai S, Itoh H, Kadowaki T, Koya D, Leeuwenburgh C, McBurney M, Nabeshima Y, Neri C, Oberdoerffer P, Pestell RG, Rogina B, Sadoshima J, Sartorelli V, Serrano M, Sinclair DA, Steegborn C, Tatar M, Tissenbaum HA, Tong Q, Tsubota K, Vaquero A, Verdin E. “[Dietary restriction: standing up for sirtuins.](#)” Science. 2010 Aug 27;329(5995):1012-3.