Kelvin Yen
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Education

Ph.D. **Neuroscience (Advisor: Dr. Charles V. Mobbs, Ph.D.)** 2001-2008
Dissertation title: Senescence in *C. elegans*: Evidence for Only Two Independent Pathways that Reduce Senescence
Department of Neuroscience, Mount Sinai School of Medicine, New York, New York

B.A. **Molecular Cell Biology: Neurobiology, Computer Science minor**, 1995-1999
University of California at Berkeley, Berkeley, California

Research Experience

Assistant Research Professor, University of Southern California 12/13-present

Post-doctoral Scholar, University of California at Los Angeles/University of Southern California, Lab of Dr. Pinchas Cohen- Examined how a novel class of peptides (mitochondria-derived peptides) influence aging and obesity 1/12-11/13

Post-doctoral Associate, University of Massachusetts Medical School, Lab of Dr. Heidi Tissenbaum - Examined how TOR and Insulin/IGF signaling interact with caloric restriction to influence lifespan in *C. elegans* 5/08-12/11

Graduate Student, Mount Sinai School of Medicine, Lab of Dr. Charles Mobbs 1/02- 2/08
Using *C. elegans* as a model organism, examined the requirements of superoxide dismutase isoforms on lifespan.

Graduate Student, Mount Sinai School of Medicine, Lab of Dr. Stephen Salton 8/01-12/01
Screened a PC12 cDNA library using the yeast 2-hybrid method with the neuropeptide VGF as the bait plasmid.

Lab Assistant, UC Berkeley, Lab of Dr. Marion Diamond 8/99-6/01
Helped with computer imaging, histological staining, and analysis of the effects of calorie restriction on neuronal patterns in the hypothalamus of mice. Acknowledged in Yaghmaie, F., O. Saeed, et al. (2005). "Caloric restriction reduces cell loss and maintains estrogen receptor-alpha immunoreactivity in the pre-optic hypothalamus of female B6D2F1 mice." Neuro Endocrinol Lett **26**(3): 197-203.

Lab Assistant, Tosk Pharmaceutical 6/99-8/99
Used high throughoutput screening methods in *Drosophila* to identify potential drugs for the prevention of neurodegenerative diseases and cancer.

Research Assistant, UC Berkeley, Paleontology Lab of Dr. Jere Lipps, 8/98-12/98
Under Dr. Jacqueline Reich helped research and program a natural language bioinformatics database.

Imaging Technician, Micro Lithography Inc., 12/97-1/98
Assisted their digital imaging department develop a particle inspection machine.

Research Assistant, U.C. San Francisco Cancer Research Institute, 6/97-8/97
Assisted in liposomal drug and liposomal gene delivery experiments.

Lab Assistant, University of British Columbia UBC Hospital Andrology Lab, 6/93-8/93
Under Dr. Gregory Lee, used western-blots, gel-electrophoresis, ELISA, and protein purification to study CMV.

Honors & Awards

Ellison Medical Foundation/American Federation of Aging Research Postdoctoral Fellowship 7/12

Wellcome Burroughs Travel Award 3/10

American Aging Association Travel Award to attend the 36th annual meeting 6/07

American Aging Association Travel Award to attend the 35th annual meeting 6/06

Mount Sinai School of Medicine Graduate Student Award for Outstanding Service 4/05

Mount Sinai School of Medicine Travel Award to attend the American Diabetes Association Meeting 6/03

The Buck Institute Partial Scholarship to attend the Symposium on Aging : Neuroendocrine Systems and Lifespan Determination 9/02

Lilly Travel Award to attend the American Neuroendocrine Society Workshop 6/02

Outstanding Volunteer Award by Cal Corps- UC Berkeley's Public Service Organization 6/99

Talks/Posters Presented

Dissecting the connections between the TOR and insulin/IGF pathways in *C. elegans* 6/11
Poster presented at the 18th International *C. elegans* Meeting

Dissecting the connections between the TOR and insulin/IGF pathways in *C. elegans* 10/10
Talk given at the Nathan Shock Aging Center 2010 Conference on Aging

Evidence for Only Two Independent Pathways for Life-Extension by Dietary Restriction, Cold Temperature, the insulin/IGF pathway, and *clk-1* Mutation 6/07
Poster Presented at the 16th International *C. elegans* Meeting

SOD Isoforms Play no Role in Lifespan in *Ad lib.* or Dietary Restricted Conditions, but Ablation of SOD-1 Reduces Life Extension by Cold 6/07
Poster Presented at the 36th Annual American Aging Association meeting

Additive Effects of Caloric Restriction, Cold Temperature, The Insulin/IGF Pathway And *clk-1* Mutation on Lifespan in *C. elegans* 6/06
Poster Presented at the 35th Annual American Aging Association meeting

2-Deoxy-D-Glucose Induced Obesity in *C. elegans* 3/04
Poster Presented at the Keystone Conference on Obesity and Diabetes

FKBP51 is regulated by fasting and leptin in the hypothalamus of mice 6/03
Poster Presented at the American Diabetes Association Meeting 2003

Fasting Combined with Hypoglycemia Down-Regulates Hypothalamus Serotonin Receptor mRNA 6/02
Poster Presented at the American Neuroendocrine Society Workshop 2002

Publications

Research

Yen, K, Zhang, D, Kwon, E, Bansal, A, Cheng, J-X, Tissenbaum, HA. Enhancement of insulin/IGF signaling through TOR signaling and their effect on lifespan, fat, and dietary restriction. Manuscript in preparation.

Manerakis, E, **Yen, K**, Lublin, AL, Poplawski, M, Patel, A, Lind, R, Kurland, IJ, Vaitheesvaran, B, Palacios, G, Mobbs, CV. Interference with glucose metabolism or inhibition of CtBP increases lipid storage through a serotonin-dependent mechanism. Manuscript in preparation.

Lublin, AL, Donatelli, K, Patel, H, Hajje, D, **Yen, K**, Schwartz, M, Mobbs CV. Natural Products Protect Against Proteotoxicity and Increase Lifespan Independent of Anti-oxidant Activity and DAF-16 but Dependent on CBP-1. Manuscript in preparation.

Lee C, Wan J, Miyazaki B, Fang Y, Guevara-Aguirre J, **Yen K**, Longo V, Bartke A, Cohen P. IGF-1 Regulates the Age-Dependent Signaling Peptide humanin. *Aging Cell*. (2014) In Press.

Perrin, AJ, Gunda, M, Yu, B, **Yen, K**, Ito, S, Forster, S, Tissenbaum, HA, Derry, WB. Noncanonical control of *C. elegans* germline apoptosis by the insulin/IGF-1 and Ras/MAPK signaling pathways. *Cell Death and Differentiation* 20: 97-107 (2013).

Yang, L, Isoda, F, **Yen, K**, Kleopoulos, SP, Janssen, W, Fan, X, Mastaitis, J, Dunn-Meynell, A, Levin, B, McCrimmon, R, Sherwin, R, Musatov, S, Mobbs, CV. Hypothalamic Fkbp51 is induced by fasting and elevated hypothalamic expression promotes obese phenotypes. *American Journal of Physiology- Endocrinology and Metabolism* 302(8): E987-91 (2012).

Lublin, AL, Isoda, F, Patel, HB, **Yen, K**, Nguyen, L, Hajje, D, Swartz, M, Mobbs, CV. FDA-approved drugs that protect mammalian neurons from glucose toxicity slow aging dependent on Creb binding protein and protect against proteotoxicity. *PLoS ONE* 6(11): e27762. doi:10.1371/journal.pone.0027762 (2011).

Narasimhan, SD, **Yen, K**, Bansal, A, Kwon, E-S, Padmanabhan, S, Tissenbaum, HA. PDP-1 links the TGF-ß and Insulin/IGF-1 signaling pathways to regulate longevity, development and metabolism. *PLoS Genetics* 7(4): e1001377. doi:10.1371/journal.pgen.1001377 (2011).

Kwon, E, Narasimhan, SD, **Yen, K**, Tissenbaum, HA. A new DAF-16 isoform regulates longevity. *Nature* 466(7305): 498-502 (2010).

Yen, K*, Le, TT*, Bansal, A, Narasimhan, SD, Cheng, X-J, Tissenbaum, HA. A Comparative Study of Fat Storage Quantitation in Nematode *Caenorhabditis elegans* Using Label and Label-Free Methods. *PLoS ONE* 5(9): e12810. doi:10.1371/journal.pone.0012810 (2010). *co-first authors

Yen, K and Mobbs, CV. Evidence for only two independent pathways for decreasing senescence in *Caenorhabditis elegans*. *Age* 32(1): 39-49 (2010).

Zhang, M, Poplawski, M, **Yen, K**, Cheng, H, Bloss, E, Zhu, X, Patel, H, Mobbs, C.V. Role of CBP and SATB-1 in Aging, Dietary Restriction, and Insulin-Like Signaling. *PLoS Biology* 7(11): e1000245. doi:10.1371/journal.pbio.1000245 (2009).

Yen, K and Mobbs, CV. SOD Isoforms Play No Role in Lifespan in Ad Lib or Dietary Restricted Conditions, but Mutational Inactivation of SOD-1 Reduces Life Extension by Cold. *Mechanisms of Ageing and Development* 130, 168-173 (2009).

Yen, K, Steinsaltz, D, Mobbs, CV. Validated Analysis of Mortality Rates Demonstrate Distinct Genetic Mechanisms that Influence Lifespan. *Experimental Gerontology* 43(12), 1044-1051 (2008).

Yen, K and Mobbs, CV Chemosensory and Caloric Mechanisms Mediate Effects of Dietary Restriction on Distinct Components of Mortality Rate. *Experimental Gerontology* 43(12), 1058-1060 (2008).

Yen, K and Mobbs, CV. Dietary Restriction and Cold Temperature Both Acutely Reduce Senescence in *C. elegans*. *Open Longevity Science* 1, 8-13 (2007).

Reviews

Lee, C, **Yen, K,** Cohen, P. Humanin: a harbinger of mitochondrial-derived peptides? *Trends in Endocrinology & Metabolism*. 24(5): 222-228 (2013).

Yen, K, Lee, C, Mehta, M, Cohen, P. The Emerging Role of the Mitochondria-Derived Peptide Humanin in Stress Resistance. *Journal of Molecular Endocrinology*. 50:1 R11-R19 (2013).

Yen, K, Narasimhan, SD, Tissenbaum HA. DAF-16/FOXO: Many Paths To a Single Fork(head) in The Road. *Antioxidant & Redox Signaling* 14(4): 623-34 (2011).

Narasimhan, SD*, **Yen, K***, Tissenbaum, HA. Converging Pathways for a Long Life. *Current Biology*. 19(15), R657-R666 (2009). *co-first authors

Mobbs, CV, Mastaitis JW, **Yen K**, Schwartz J, Mohan V, Poplawski M, Isoda F. Low-carbohydrate diets cause obesity, low-carbohydrate diets reverse obesity: A metabolic mechanism resolving the paradox. *Appetite* 48(2), 135-138 (2007).

Mobbs, C., Isoda, F, Makimura, H, Mastaitis, JW, Mizuno, T, Shu, IW, **Yen, K**, Yang, XJ. Impaired glucose signaling as a cause of obesity and the metabolic syndrome: The glucoadipostatic hypothesis. *Physiology and Behavior* 85(1), 3-23 (2005).

Yen K, Mastaitis JW, Mobbs CV. Lifespan is not determined by metabolic rate: evidence from fishes and *C. elegans. Experimental Gerontology* 39(6), 947-949 (2004).

Mobbs, CV, **Yen K**, Mastaitis, JW, Nguyen H, Watson E, Wurmbach E, Sealfon SC, Salton RJS. Mining Microarrays for Metabolic Meaning: Nutritional Regulation of Hypothalamic Gene Expression. *Neurochemical Research* 29(6), 1093-1103 (2004).

Books & Book Chapters

Mobbs, CV, **Yen K**, Hof PR, eds. Mechanisms of Dietary Restriction in Aging and Disease. Basal: Karger, 2007.

Mobbs, CV, Mastaitis, JW, Zhang, M, Isoda, F, Cheng, H, **Yen, K**. "Secrets of the *lac* Operon" Mechanisms of Dietary Restriction in Aging and Disease. Eds. Mobbs *et al*. Basal: Karger, 2007.

Service, Teaching & Leadership Experience

Editorial Board Member of the *Research Journal of Aging* 1/14-Present
Editorial Board Member of the journal *ISRN Physiology* 6/12-Present
Invited Reviewer for *Biochimica et Biophysica Acta*'s special issue on Biochemical and 6/09
Molecular Mechanisms of Aging by guest editor Edward J. Masaro
Co-Head Organizer, Taiwanese-American Youth Leadership Camp, 2/99–6/99
Organized a camp with 25 counselors and 80 students under my supervision
Steering Committee, Taiwanese-American Youth Leadership Camp, 2/98-6/01
Helped organize the camp for high school and elementary school students
Mentor, Inspire mentorship program, 8/98-6/99
Mentored an underprivileged Oakland high school student by tutoring him academically as well as helping him in his preparation for college
Tutor, Oakland Asian Student Education Services, 8/96 -12/98
Tutored high school students in math and science