

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 Berkeley, Berkeley, California

Research Experience

- Associate Research Professor**, University of Southern California Leonard Davis School of Gerontology 08/21-Present
- Assistant Research Professor**, University of Southern California Leonard Davis School of Gerontology 12/13-7/21
- Post-doctoral Scholar**, University of California Los Angeles, Lab of Dr. Pinchas Cohen 01/12-11/13
Examined how a novel class of peptides (mitochondria-derived peptides) influence aging and obesity
- Post-doctoral Associate**, University of Massachusetts Medical School, Lab of Dr. Heidi Tissenbaum 05/08-12/11
Examined how TOR and Insulin/IGF signaling interact with caloric restriction to influence lifespan in *C. elegans*
- Graduate Student**, Mount Sinai School of Medicine, Lab of Dr. Charles Mobbs 01/02-02/08
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 08/01-12/01
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 08/99-06/01
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 06/99-08/99
Used high throughput 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 08/98-12/98
Under Dr. Jacqueline Reich helped research and program a natural language bioinformatics database.
- Imaging Technician**, Micro Lithography Inc., 12/97-01/98
Assisted their digital imaging department develop a particle inspection machine.
- Research Assistant**, U.C. San Francisco Cancer Research Institute, Lab of Dr. Keelung Hong 06/97-08/97
Assisted in liposomal drug and liposomal gene delivery experiments.
- Lab Assistant**, University of British Columbia UBC Hospital Andrology Lab, 06/93-08/93
Under Dr. Gregory Lee, used western-blot, gel-electrophoresis, ELISA, and protein purification to study CMV.

Honors & Awards

- AARP Best Research Scientist Prize** 12/17
- Ella Fitzgerald Foundation Research Award** 10/17
- Hanson Thorell Family Research Scholarship** 03/17
- Elsevier Family Support Award** to attend the Multifaceted Mitochondria Symposia 07/15
- Ellison Medical Foundation/American Federation of Aging Research Postdoctoral Fellowship** 07/12
- Wellcome Burroughs Travel Award** 03/10
- American Aging Association Travel Award** to attend the 36th annual meeting 06/07
- American Aging Association Travel Award** to attend the 35th annual meeting 06/06
- Mount Sinai School of Medicine Graduate Student Award for Outstanding Service** 04/05
- Mount Sinai School of Medicine Travel Award** to attend the American Diabetes Association Meeting 06/03
- The Buck Institute Partial Scholarship** to attend the Symposium on Aging : 09/02

Lilly Travel Award to attend the American Neuroendocrine Society Workshop 06/02
Outstanding Volunteer Award by Cal Corps- UC Berkeley's Public Service Organization 06/99

Invited Talks

Science and Discovery Panel Member 6/23
 Advancing Geroscience: From Potential to Practice to Policy, USC, CA

MENTSH: A Novel Mitochondrial Microprotein and SNP Implicated in Diabetes 10/23
 Targeting Metabesity Conference, Online

A Novel Therapeutic for Diabetes and Obesity 3/19
 Vibrant Living Retreat, Ojai, CA

A Novel Mitochondrial Derived Peptide Affecting Diabetes 3/19
 Mitochondria: From basic biology to mechanisms of disease conference, Nassau, The Bahamas

Mitochondrial Derived Peptides: Novel Signaling Mechanisms to Regulate Cellular Metabolism 11/16
 American Heart Association Scientific Session, New Orleans, LA

Humanin's Effects on Healthspan and Lifespan 06/16
 American Aging Association's Annual Meeting, Seattle, WA

Humanin's Effects on Healthspan and Lifespan 10/15
 Nathan Shock Center Conference on Aging, San Antonio, TX

Humanin 05/15
 Institute of the Developing Mind at Children's Hospital L.A.

Dissecting the connections between the TOR and insulin/IGF pathways in *C. elegans* 10/10
 Nathan Shock Center Conference on Aging, San Antonio, TX

Publications

Research

Kim SJ, Miller B, Hartel NG, Ramirez R, 2nd, Braniff RG, Leelaprachakul N, Huang A, Wang Y, Arpawong TE, Crimmins EM, Wang P, Sun X, Liu C, Levy D, **Yen K**, Petzinger GM, Graham NA, Jakowec MW, Cohen P. A naturally occurring variant of SHLP2 is a protective factor in Parkinson's disease. *Mol Psychiatry*. 2024. Epub 20240103. doi: 10.1038/s41380-023-02344-0. PubMed PMID: 38167865.

Kumagai H, Kim SJ, Miller B, Natsume T, Wan J, Kumagai ME, Ramirez Li R, Lee SH, Sato A, Mehta HH, **Yen K**, Cohen P. Mitochondrial-derived microprotein MOTS-c attenuates immobilization-induced skeletal muscle atrophy by suppressing lipid infiltration. *Am J Physiol Endocrinol Metab*. 2024. Epub 20240103. doi: 10.1152/ajpendo.00285.2023. PubMed PMID: 38170165.

Miller B, Kim SJ, Mehta HH, Cao K, Kumagai H, Thumaty N, Leelaprachakul N, Braniff RG, Jiao H, Vaughan J, Diedrich J, Saghatelian A, Arpawong TE, Crimmins EM, Ertekin-Taner N, Tubi MA, Hare ET, Braskie MN, Decarie-Spain L, Kanoski SE, Grodstein F, Bennett DA, Zhao L, Toga AW, Wan J, **Yen K**, Cohen P, Alzheimer's Disease Neuroimaging I. Mitochondrial DNA variation in Alzheimer's disease reveals a unique microprotein called SHMOOSE. *Mol Psychiatry*. 2023;28(4):1813-26. Epub 20220921. doi: 10.1038/s41380-022-01769-3. PubMed PMID: 36127429; PMCID: PMC10027624.

Kumagai H, Miller B, Kim SJ, Leelaprachakul N, Kikuchi N, **Yen K**, Cohen P. Novel Insights into Mitochondrial DNA: Mitochondrial Microproteins and mtDNA Variants Modulate Athletic Performance and Age-Related Diseases. *Genes* 2023; 14(2) 286.

Kumagai H, Natsume T, Kim SJ, Tobina T, Miyamoto-Mikami E, Shiose K, Ichinoseki-Sekine N, Kakigi R, Tsuzuki T, Miller B, **Yen K**, Murakami H, Miyachi M, Zempo H, Dobashi S, Machida S, Kobayashi H, Naito H, Cohen P, Fuku N. The MOTS-c K14Q polymorphism in the mtDNA is associated with muscle fiber composition and muscular performance. *Biochim Biophys Acta Gen Subj*. 2022;1866(2):130048. Epub 2021/11/04. doi: 10.1016/j.bbagen.2021.130048. PubMed PMID: 34728329; PMCID: PMC8741734.

Kim SJ, Devgan A, Miller B, Lee SM, Kumagai H, Wilson KA, Wassef G, Wong R, Mehta HH, Cohen P, **Yen K**. Humanin-induced autophagy plays important roles in skeletal muscle function and lifespan extension. *Biochim Biophys Acta Gen Subj*. 2022;1866(1):130017. Epub 2021/10/09. doi: 10.1016/j.bbagen.2021.130017. PubMed PMID: 34624450; PMCID: PMC8595716.

Kumagai H, Coelho AR, Wan J, Mehta HH, **Yen K**, Huang A, Zempo H, Fuku N, Maeda S, Oliveira PJ, Cohen P, Kim S-J. MOTS-c reduces myostatin and muscle atrophy signaling. *American Journal of Physiology-Endocrinology and Metabolism* 320 (4), (2021) E680-E690.

Miller B, Silverstein A, Flores M, Cao K, Kumagai H, Mehta HH, **Yen K**, Kim SJ, Cohen P. Host mitochondrial transcriptome response to SARS-CoV-2 in multiple cell models and clinical samples. *Sci Rep*. 2021;11(1):3. Epub 2021/01/10. doi: 10.1038/s41598-020-79552-z. PubMed PMID: 33420163; PMCID: PMC7794290.

Zempo H, Kim SJ, Fuku N, Nishida Y, Higaki Y, Wan J, **Yen K**, Miller B, Vicinanza R, Miyamoto-Mikami E, Kumagai H, Naito H, Xiao J, Mehta HH, Lee C, Hara M, Patel YM, Setiawan VW, Moore TM, Hevener AL, Sutoh Y, Shimizu A, Kojima K, Kinoshita K, Arai Y, Hirose N, Maeda S, Tanaka K, Cohen P. A pro-diabetogenic mtDNA polymorphism in the mitochondrial-derived peptide, MOTS-c. *Aging* (Albany NY). 2021 Jan 19;13(2):1692-1717. doi: 10.18632/aging.202529. PMID: 33468709; PMCID: PMC7880332.

Yen K, Mehta HH, Kim S-J, Lue Y, Hoang J, Guerrero N, Port J, Bi Q, Navarrete G, Brandhorst S, Lewis KN, Wan J, Swerdloff R, Mattison JA, Buffenstein R, Breton CV, Wang C, Longo V, Atzmon G, Wallace D, Barzilai N, Cohen P. The mitochondrial derived peptide humanin is a regulator of lifespan and healthspan. *Aging* (Albany NY) 12(12):11185-11199 (2020) PMID: 32575074.

Miller B, Torres M, Jiang X, McKean-Cowdin R, Noursome D, Kim S-J, Mehta HH, **Yen K**, Cohen P, and Varma R. A Mitochondrial Genome-Wide Association Study of Cataract in a Latino Population. *Translational Vision Science & Technology* 9(6), 25 (2020) PMID: 32821522.

Kim S-J, Miller B, Mehta HH, Xiao J, Wan J, Arpawong TE, **Yen K**, Pinchas C. The mitochondrial-derived peptide MOTS-c is a regulator of plasma metabolites and enhances insulin sensitivity. *Physiological Reports* 7(13), e14171 (2019) PMID: 31293078.

Mehta HH, Xiao J, Ramirez R, Miller B, Kim S-J, Pinchas C, **Yen K**. Metabolomic profile of diet-induced obesity mice in response to humanin and small humanin-like peptide 2 treatment. *Metabolomics* 15, 88 (2019) PMID: 31172328.

Breton CV, Song AY, Xiao J, Kim S-J, Mehta HH, Wan J, **Yen K**, Sioutas C, Lurmann F, Xue S, Morgan TE, Zhang J, Cohen P. Effects of air pollution on mitochondrial function, mitochondrial DNA methylation, and mitochondrial peptide expression. *Mitochondrion* 46, 22– 29 (2019) PMID: 30980914.

Miller B, Arpawong TE, Jiao H, Kim S-J, **Yen K**, Mehta HH, Wan J, Carpten JC, Cohen P. Comparing the Utility of Mitochondrial and Nuclear DNA to Adjust for Genetic Ancestry in Association Studies. *Cells* 8(4):306 (2019) doi:10.3390/cells8040306 PMID: 30987182 .

Kim, S-J, Chun, M, Wan, J, Lee, C, **Yen, K** and Cohen P. GRSF1 Is an Age-Related Regulator of Senescence. *Scientific Reports* 9, no. 1 (April 3, 2019): 5546. doi:10.1038/s41598-019-42064-6 PMID: 30944385.

Yen K, Wan J, Mehta HH, Miller B, Christensen A, Levine ME, Salomon MP, Brandhorst S, Xiao J, Kim S-J, Navarrete G, Campo D, Harry JG, Longo V, Pike CJ, Mack WJ, Hodis HN, Crimmins EM, Cohen P. Humanin Prevents Age-Related Cognitive Decline in Mice and Is Associated with Improved Cognitive Age in Humans. *Scientific Reports* 8(1): 14212 (2018). doi:10.1038/s41598-018-32616-7 PMID: 30242290.

Qing Q, Mehta H, **Yen K**, Navarrete G, Brandhorst S, Wan J, Delrio S, Lerman L, Cohen P, Lerman A. Chronic Treatment With the Mitochondrial Peptide Humanin Prevents Age-related Myocardial Fibrosis in mice. *American Journal of Physiology- Heart and Circulatory Physiology*. 315(5):H1127-H1136 (2018) PMID: 30004252.

Kim S-J, Xiao J, Cohen P, **Yen K**. Subcellular Fractionation for ERK Activation upon Mitochondrial-Derived Peptide Treatment. *Journal of Visual Experiments*. 25(127) (2017) PMID: 28994791.

Okada A, Teranishi K, Lobo F, Isas JM, Xiao J, **Yen K**, Cohen P, Langen R. The Mitochondrial-Derived Peptides, HumaninS14G and Small Humanin-like Peptide 2, Exhibit Chaperone-like Activity. *Scientific Reports* 7:7802 (2017) PMID: 28798389.

Hine C, Kim HJ, Zhu Y, Harputlugil E, Longchamp A, Matos MS, Ramadoss P, Bauerle K, Brace L, Asara JM, Ozaki CK, Cheng SY, Singha S, Ahn KH, Kimmelman A, Fisher FM, Pissios P, Withers DJ, Selman C, Wang R, **Yen K**, Longo VD, Cohen P, Bartke A, Kopchick JJ, Miller R, Hollenberg AN, Mitchell JR. Hypothalamic-Pituitary Axis Regulates Hydrogen Sulfide Production. *Cell Metabolism*. 25(6):1320-1333.e5 (2017) PMID: 28591635.

Kim SJ, Guerrero N, Wassef G, Xiao J, Mehta HH, Cohen P, **Yen K**. The mitochondrial-derived peptide humanin activates the ERK1/2, AKT, and STAT3 signaling pathways and has age-dependent signaling differences in the hippocampus. *Oncotarget*. 7(30):46899-46912 (2016) PMID: 2738449.

Cobb LJ, Lee C, Xiao J, **Yen K**, Wong RG, Nakamura HK, Mehta H, Gao Q, Ashur C, Huffman DM, Wan J, Muzumdar R, Barzilai N, Cohen P. Naturally Occurring Mitochondrial-Derived Peptides are age-Dependent Regulators of Apoptosis, Insulin Sensitivity, and Inflammatory Markers. *Aging* 8(4):796-809 (2016) PMID: 27070352.

Parameswaran S, Ishikawa K, Spee C, Mehta H, Wan J, **Yen K**, Cohen P, Kannan R, and Hinton D. The Mitochondrial-Derived Peptide Humanin protects RPE cells from Oxidative Stress, Senescence, and Mitochondrial Dysfunction. *Investigative Ophthalmology and Visual Science* 57: 1238-1253 (2016) PMID: 26990160.

Bansal A, Zhu Lihua J, **Yen K**, Tissenbaum HA. Uncoupling lifespan and healthspan in *Caenorhabditis elegans* longevity mutants. *PNAS* 112(3): E277-E286 (2015) PMID: 25561524.

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* 13: 958-961 (2014) PMID: 25040290.

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) PMID: 23239898.

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) PMID: 22318949.

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) PMID: 22114686.

Narasimhan SD, **Yen K**, Bansal A, Kwon E-S, Padmanabhan S, Tissenbaum HA. PDP-1 links the TGF- β and Insulin/IGF-1 signaling pathways to regulate longevity, development and metabolism. *PLoS Genetics* 7(4): e1001377. doi:10.1371/journal.pgen.1001377 (2011) PMID: 21533078.

Kwon E, Narasimhan SD, **Yen K**, Tissenbaum HA. A new DAF-16 isoform regulates longevity. *Nature* 466(7305): 498-502 (2010) PMID: 20613724.

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) PMID: 20862331. *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) PMID: 19662517.

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) PMID: 19924292.

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) PMID: 19059428.

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) PMID: 18832022.

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) PMID: 18790043.

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

Miller B, Kim SJ, Kumagai H, **Yen K**, Cohen P. Mitochondria-derived peptides in aging and healthspan. *JCI* 2022; 132(9).

Kim SJ, Miller B, Kumagai H, Silverstein AR, Flores M, **Yen K**. Mitochondrial-derived peptides in aging and age-related diseases. *Geroscience*. In Press (2020) PMID: 32910336

Silverstein AR, Flores M, Miller B, Kim S-J, **Yen K**, Mehta HH, Cohen P. Mito-Omics and immune function: Applying novel mitochondrial omic techniques to the context of the aging immune system. *Translational Medicine of Aging*. 4:132-140 (2020) PMID: 32844137.

Miller B, Kim SJ, Kumagai H, Mehta HH, Xiang W, Liu J, **Yen K**, Cohen P. Peptides derived from small mitochondrial open reading frames: Genomic, biological, and therapeutic implications. *Experimental Cell Research*. May 5:112056 (2020) PMID: 32387288

Kim S-J, Miller B, Kumagai H, **Yen K**, Cohen P. MOTS-C: an Equal Opportunity Insulin Sensitizer. *Journal of Molecular Medicine* 1-4 (2019) PMID: 30788534

Kim S-J, Xiao J, Wan J, Cohen P, **Yen K**. Mitochondrially derived peptides as novel regulators of metabolism. *Journal of Physiology (London)*. 595, 6613- 6621 (2017) PMID: 28574175.

Xiao J, Kim SJ, Cohen P, **Yen K**. Humanin: Functional Interfaces with IGF-I. *Growth Hormone and IGF Research*. 29:21-27 (2016) PMID: 27082450.

Lee C, **Yen K**, Cohen P. Humanin: a harbinger of mitochondrial-derived peptides? *Trends in Endocrinology & Metabolism*. 24(5): 222-228 (2013) PMID: 23402768.

Yen K, Lee C, Mehta H, Cohen P. The Emerging Role of the Mitochondria-Derived Peptide Humanin in Stress Resistance. *Journal of Molecular Endocrinology*. 50:1 R11-R19 (2013) PMID: 23239898.

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) PMID: 20673162.

Narasimhan SD*, **Yen K***, Tissenbaum HA. Converging Pathways for a Long Life. *Current Biology*. 19(15), R657-R666 (2009) PMID: 19674551. *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) PMID: 17141367.

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) PMID: 15924903.

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) PMID: 15217699.

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) PMID: 15176466.

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 PMID: 17063032.

Patents

"MENTSH analogs as therapeutics for diabetes, obesity, and their associated diseases and complication" International patent # PCT/US2017/039139 filed June 23, 2017. Pinchas Cohen and **Kelvin Yen**.

Other Publications

NextGen VOICES. *Science*. July 6, 2012. (Online) <https://science.sciencemag.org/content/suppl/2012/07/03/337.6090.32.DC1>

NextGen VOICES. *Science*. 365(6448), 22-23. July 5, 2019.
<https://science.sciencemag.org/content/365/6448/22/>

Research Support

Current Research Support

Yen (PI) 2024

Anita and William Jeung Pilot Award

Characterization of a novel mitochondrial microprotein associated with AD-risk in Latinas

Completed Research Support

P01AG055369 Longo (PI)

2/18-1/23

NIA

Dietary Restriction, GH/IGF-I & Mechanisms of Differential Cellular Protection

The major goals of this project are to understand the role of IGF blockade in aging and longevity.

Role: Project #2 Co-investigator

I was a co-investigator working on humanin regulation by diet

Yen (PI) 2021

USC-Buck Nathan Shock Center Pilot Award

Investigation of a Conserved, Age-Related Mitochondrial Derived Peptide

Yen (PI) 2021

Daryl and Irwin Simon AD Award

Deciphering the role of the nutritionally-regulated, mitochondrial-derived peptide humanin in brain aging and AD

The goal of this project was to discover how humanin affects brain aging and AD.

Yen (PI) 2018

Hinrich Foundation Award

Yen (PI) 2018

Navigage Foundation Award

Mitochondrial Derived Peptides and Healthspan

Yen (PI) 7/17-6/18

Hanson Thorell Family Research Award

Elucidation of conserved humanin longevity pathways

The goal of this project is to discover the mechanism by which humanin increases lifespan in *C. elegans* and then translate that to a human cell culture model.

Yen (PI) 7/17-6/18

USC/UCLA Biodemography Center Pilot Project Award

Modulation of cognitive decline by genetic variation in the mitochondrial humanin gene

The goal of this project is to investigate the hypothesis that the humanin SNP will be predictive of humanin-related phenotypes such as cognitive decline and metabolic dysfunction, and its interaction with both ApoE and air pollution will be associated with a worse outcome, particularly in African-Americans.

Yen (Co-PI)

1/14-1/17

Alzheimer's disease research center of USC pilot grant

Humanin, a Novel Mitochondrial Derived Peptide that Ameliorates A β Toxicity

The goal of this project is to discover the mechanism by which humanin prevents amyloid- β toxicity.

P01AG034906 Longo (PI)

4/11-03/16

NIA

Dietary Restriction, GH/IGF-I & Mechanisms of Differential Cellular Protection

The major goals of this project are to understand the role of IGF blockade in aging and longevity.

Role: Project #2 Co-investigator

I was a co-investigator working on humanin regulation by diet

Yen (PI)

6/15-05/16

USC Undergraduate Research Program

A Novel, Mitochondrial Derived Peptide as a Possible Treatment for Obesity

1R01GM090311 Cohen (PI)

10/09-09/15

NIGMS Transformative-RO1

Novel Mitochondrially Derived Peptides and Their Role in Health and Disease

The goals of this project are to discover novel mitochondrial encoded peptides and to understand the function of novel mitochondrial peptides in physiology and disease.

I was a co-investigator working on MDP discovery

Yen (PI)

7/12-6/13

Ellison Medical Foundation/American Federation of Aging Research Postdoctoral Fellowship

Novel & Conserved Mitochondrial Derived Peptides in Aging and Disease

Pending Research Support

None

Service, Teaching & Leadership Experience

Ad Hoc reviewer for *Acta Histochemica, AJP: Renal Physiology, Biochemistry, Biochemistry and Biophysics Reports, Biochimica et Biophysica Acta, Cell Metabolism, Cellular Signaling, Clinical and Translational Medicine, Current Aging Science, Endocrinology, Expert Opinion on Therapeutic Targets, FEBS Open Bio, Journal of Agricultural and Food Chemistry, Journal of Applied Physiology, Journal of Cell Communication and Signaling, Journal of the Egyptian National Cancer Institute, Journal of Food and Nutrition, Journal of Molecular Medicine, Journal of Visualized Experiments, JSM Biology, Medical Science Monitor, Molecular & Cellular Endocrinology, Neuropeptide, Oxidative Medicine and Cellular Longevity, Peptides, Scientific Reports, Theranostics, Translational Neuroscience*

Grant Reviewer for the Dutch Cancer Society (KWF)

2023

Grant Reviewer for the UC Irvine Gavin Herber Eye Institute

2023

Editorial Board Member of <i>Journal of Mitochondria, Plastids and Endosymbiosis</i>	2023-Present
Grant Reviewer for the Swiss National Science Foundation	2023
Grant Reviewer for the National Science Foundation	2021
Grant Reviewer for National Science Center of Poland (Narodowe Centrum Nauki – NCN)	2019
Grant Reviewer for the Auckland Medical Research Foundation	2019
Editorial Board Member of <i>Translational Neuroscience</i>	2017-Present
Grant Reviewer for the Marsden Fund, the Royal Society of New Zealand	2016
Teacher Supervised students for directed research classes Gero 490, HP 490, and BISC 490	8/13-Present
Editorial Board Member of the journal <i>ISRN Physiology</i>	6/12-11/17
Editorial Board Member of the <i>Research Journal of Aging</i>	1/14-12/14
Ad Hoc Reviewer for <i>Biochimica et Biophysica Acta's</i> special issue on Biochemical and Molecular Mechanisms of Aging by guest editor Edward J. Masaro	6/09
Co-Head Organizer , Taiwanese-American Youth Leadership Camp, Organized a camp with 25 counselors and 80 students under my supervision	2/99– 6/99
Steering Committee , Taiwanese-American Youth Leadership Camp, Helped organize the camp for high school and elementary school students	2/98-6/01
Mentor , Inspire mentorship program, Mentored an underprivileged Oakland high school student by tutoring him academically as well as helping him in his preparation for college	8/98-6/99
Tutor , Oakland Asian Student Education Services, Tutored high school students in math and science	8/96 -12/98