BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Philip J. Scarpace	Professor, Pharmacology and Therapeutics
eRA COMMONS USER NAME (credential, e.g., agency login) SCARPACE	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
California State University, San Jose, CA	B.S.	1970	Physics (minor Chem)
University of Rochester, Rochester, N.Y.	Ph.D.	1974	Biophysics
University of Rochester, Rochester, N.Y.		1974-1975	NIH Fellow

A. Personal Statement

I have an extensive experience in research, with continuous federal funding as a principal investigator since 1980 and continuous funding as a principal investigation in the area of leptin and obesity since 1997, just a few years after the discovery of leptin. I am a past PI of NIA funded T32 grant as well as mentor on two other T32 grants at the University of Florida. I have long history of training numerous graduate students, post-doctoral fellows, and serving as mentor to junior faculty. I am strong believer that education and training is one of the most important functions of a University, and one that I truly enjoy. Current research studies focus on elucidating the mechanism of leptin resistance and role of diet in obesity and obesity related hypertension and cardiovascular complications. In summary, I have a demonstrated record of successful education and training of young scientists as well as a productive research program, and my expertise and experience have prepared me to participate as a mentor in the proposed project.

B. Positions and Honors

Positions and Employment

1975-1976 Assistant Professor of Physiology, San Diego State University, San Diego, CA.
1977-1981 Instructor of Mathematics, (Computer Sciences), Moorpark College, California.
1979-1981 Assistant Professor of Mathematics, California State University at Northridge
1977-1987 Assistant Research Pharmacologist, Dept. of Medicine, UCLA
1977-1987 Chief, Molecular Biophysics Laboratory, Geriatric Research, Education and Clinical Center, Veterans Administration Medical Center, Sepulveda, California.
1988-1993 Associate Director, Center for Research on Oral Health and Aging, University of Florida
1987-1994 Associate Professor of Pharmacology and Therapeutics, University of Florida
1987-2004 Research Director, Geriatric Research, Education and Clinical Center, Veterans Administration Medical Center, Gainesville, Florida.
1994-present Professor of Pharmacology and Therapeutics, University of Florida.

Other Experience

1984-1999 VA Merit Review Board: Aging and Clinical Geriatrics, Ad Hoc Reviewer.
1990 NIH Study Section: Biochemical Endocrinology, member, Ad Hoc Study Section.
1991-2000 GRECC Review Site Visit Team: member
1992-1996 Editorial Review Board: Journal of Gerontology: Biological Sciences,
1993 Program Chair, Gerontological Society of America Annual Meeting.
1996-2000 Associate Editor: Journal of Gerontology: Biological Sciences.
1998-2001 Editorial Review Board: American J of Physiology: Endocrinology & Metabolism
2000-2003 Secretary-Treasurer, Gerontological Society of America, Biological Sciences,
2001-2005 VA Merit Review Board: Aging and Clinical Geriatrics, member

Honors

1999-2004 Research Career Scientist, Veterans Administration

C. Selected Peer-Reviewed Publications and Manuscripts (in chronological order, out of 167).

1. Scarpace, P.J., M. Matheny, R.L. Moore and N. Tümer. Impaired leptin responsiveness in aged rats. Diabetes 49:431-435, 2000.
2. Scarpace, P.J., M. Matheny, Y. Zhang, E.W. Shek, V. Prima, S. Zolotukhin and N. Tümer. Leptin-induced leptin resistance reveals separate roles for the anorexic and thermogenic responses in weight maintenance. Endocrinology 143,143, 3026-3035, 2002.
3. Li, G, C.V. Mobbs and P.J. Scarpace. Central Pro-melanocortin gene delivery results in hypophagia, reduced visceral adiposity and improved insulin sensitivity in genetically obese Zucker rats. Diabetes, 52, 1951-1957, 2003.
4. Shklyaev, S., G. Aslanidi, M. Tennant , V. Prima , E. Kohlbrenner, V. Kroutov, M. Campbell-Thompson, J. Crawford,, E.W. Shek, P. J. Scarpace, and S. Zolotukhin. Sustained rAAV-mediated peripheral expression of transgene adiponectin offsets the development of diet-induced obesity in rats. PNAS, 100, 14217-14222, 2003.
5. Scarpace P.J., M. Matheny, Y. Zhang, K.Y. Cheng, and N. Tümer. Leptin-induced leptin resistance exacerbates diet-induced obesity and is associated with impaired maximal leptin signaling capacity. Diabetologia, 48, 1075-1083, 2005.
6. Wilsey, J.T. and P.J. Scarpace. Oral Vanadium Enhances the Catabolic Effects of Central Leptin in Lean Rats. Endocrinology, 147, 493-501, 2006.
7. Scarpace P.J., M. Matheny, Y. Zhang, K.Y. Cheng, and N. Tümer. Leptin antagonist reveals an uncoupling between leptin receptor STAT3 signaling and metabolic responses with central resistance. J Pharmacol Exp Ther, 320:706-712, 2007.
8. Li, G., K.Y. Cheng, Y. Zhang, and P.J. Scarpace. Lean rats with hypothalamic pro-opiomelanocortin overexpression exhibit greater diet-induced obesity and impaired central melanocortin responsiveness. Diabetologia, 50(7):1490-9 2007.
9. Shapiro, A., M.K. Matheny, Y. Zhang, N. Tümer, K.Y. Cheng, E. Rodrigues, S. Zolotukhin, and P.J. Scarpace. Synergy between leptin therapy and a seemingly negligible amount of voluntary wheel running prevents progression of dietary obesity in leptin resistant rats. Diabetes, 57(3):614-22, 2008.
10. Scarpace P.J., and Y. Zhang. Leptin Resistance: A predisposing factor for diet-induced obesity. Am J Physiol Regul Integr Comp Physiol; Mar;296(3):R493-500, 2009.
11. Zhang, J., and P.J. Scarpace. Soluble leptin receptor neutralizes leptin mediated STAT3 signaling and anorexic responses *in vivo;* Brit J Pharmacol, 158, 475-482, 2009.
12. Matheny MK, Zhang Y, Shapiro A, Tumer N, Scarpace PJ. Central overexpression of a leptin antagonist reduces wheel running and underscores the importance of endogenous leptin receptor activity in energy homeostasis. Am J Physiol Regul Integr Comp Physiol. 297(5):R1254-1261, 2009.
13. Scarpace P.J., M.K. Matheny, and Y. Zhang. Wheel running eliminates high-fat preference and enhances leptin signaling in the ventral tegmental area. Physiol Behav; 100(2):173-9 2010.
14. Matheny M, A. Shapiro, N. Tümer, and P.J. Scarpace. Region-Specific Diet-induced and Leptin-Induced Cellular Leptin Resistance Includes the Ventral Tegmental Area in Rats. Neuropharmacology. 60(2-3):480-7, 2011.
15. Shapiro A, Tümer N, Gao Y, Cheng KY, Scarpace PJ. Prevention and reversal of diet-induced leptin resistance with a sugar-free diet despite high fat content. Br J Nutr. Aug;106(3):390-7, 2011.
16. Zhang, Y., E. Rodrigues. G. Li, Y.X. Gao, M. King, C. Carter, N. Tümer, K.Y. Cheng, and P.J. Scarpace. Simultaneous POMC gene transfer to hypothalamus and brainstem increases physical activity, lipolysis and reduces adult-onset obesity**.** Eur J Neurosci. 33(8):1541-50. 2011.
17. Andino, L.M, D.J. Ryder, A. Shapiro, M.K. Matheny, Y. Zhang, MK. Judge, KY. Cheng, N. Tümer, and PJ. Scarpace. POMC Overexpression in the Ventral Tegmental Area Ameliorates Dietary Obesity. J Endocrino; 210(2):199-207, 2011
18. Scarpace, ET, M. Matheny, K.Y.E. Strehler, A. Shapiro, K.Y. Cheng, N. Tümer, and P.J. Scarpace. Simultaneous Introduction of a Novel High Fat Diet and Wheel Running Induces Anorexia. Physiol Behav; 105(4):909-14, 2012.
19. Scarpace, PJ, M. Matheny, N. Tümer, and Y. Zhang, Leptin Overexpression in VTA Trans-activates the Hypothalamus whereas Prolonged Leptin Action in either Region Cross-Desensitizes. Neuropharmacology; 65: 90–100, 2012.
20. Vasselli, JR, PJ Scarpace, RBS Harris and WA Banks. Dietary Components in the Development of Leptin Resistance. Adv Nutr, 4(2):164-75, 2013

D. Research Support

ONGOING

R01 DK091710-01A1 (Scarpace: PI) 7/12 to 06/16 3.6 Person Months
NIH/NIDDK $250,000 (DC, annual)
"*Mechanisms of diet-induced leptin resistance in ARC and VTA*"
The project examines the role of excess dietary fructose in leptin resistance and obesity.
Role: PI

P30 AG028740 (Pahor: PI) 04/12 to 03/17 0.3 Person Months
NIH/NIA $711,000 (DC, annual)
" Claude D. Pepper Older Americans Independence Center "
The major goals of this center are to establish interdisciplinary research program on saccopenia, prevention and rehabilitation of disability, including molecular, animal, clinical, and behavioral models.
Role: Investigator

VA Merit Review (Kotz: PI) 07/11 to 06/15 0.5 Person Months
Veterans Administration $250,000 (DC, annual)
"Enhancing NEAT to Treat Obesity"
The major goals of this project are to define the role of orexin action in the dorsal raphe and locus coeruleus to increase spontaneous physical activity and non-exercise activity thermogenesis.
Role: Investigator

COMPLETED

T32 AG00196 Scarpace (PI) 05/07-04/12
NIH
Training in the Neurobiology of Aging
This training grant supported three pre-doctoral fellows and three post-doctoral fellows.
Role: P.I.

P30 AG028740-01(PI: Pahor) 06/07-05/30/12
NIH/NIA
Claude D. Pepper Older Americans Independence Center (OAIC)
Preclinical Reseach Core (leader: Scarpace)
The major goals of this program are to assess the mechanisms leading to sarcopenia and functional decline, and to develop and test preclinical interventions for the treatment and prevention of physical disability in older adults.
Role: Preclinical Core leader

Veterans Administration 10/09-09/13
Merit Review (PI: Zhang)
"Leptin function & resistance in midbrain VTA & SN in reward eating & obesity"
The major goals of this program are to examine the role of leptin in the VTA and SN to deter dietary obesity and reward eating.
Role: Co-PI

R21NS074354 (PI: Mandel) 3/11-2/2013
NIH/NINDS
Nigrostriatal GDNF over-expression to modulate obesity: from rat to primate
The major goals of this project are: 1. To determine whether there is a differential effect on metabolism and body weight when GDNF is over-expressed in the VTA vs. the nAcc and/or hypothalamus. 2. To determine the extent to which mesolimbic DA plays a direct role in GDNF-over-expression induced weight loss.
Percent effort: 5%
Role: Co-I.