

Curriculum vitae

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Center for Hypothalamic Research



Work has been featured in/on:



Education

Year	Degree (Honors)	Field of Study (Thesis advisor for PhDs)	Institution
1995-1997	A.S.	Biology	Collin County Community College
1997-1999	B.S.	Biology	The University of Texas at Dallas
2001-2006	Ph.D.	Neuroscience	The Tulane University of Louisiana

Personal Statement

I have a broad background in neuroscience and physiology, with specific training and expertise in key research areas. In particular, my laboratory implements mouse genetics, electrophysiology, and systems neuroscience approaches to address pertinent scientific questions. The goal of my research is to identify novel neural circuits, neurotransmitters, and intracellular molecules in the brain that are critical for the proper control of feeding behavior, body weight, glucose balance, and cardiovascular health. I hope that results from my research will identify rational targets for developing potential therapeutic strategies for obesity, eating disorders, diabetes, and hypertension.

Postdoctoral Training [*Include residency/fellowship*]

Year(s)	Titles	Specialty/Discipline (Lab PI for postdoc research)	Institution
2009-2009	Postdoctoral Fellow	Department of Internal Medicine-Division of Hypothalamic Research (Mentor: Joel K. Elmquist D.V.M. Ph.D.)	The University of Texas Southwestern Medical Center, Dallas, TX

Faculty Academic Appointments

Year(s)	Academic Title	Department	Academic Institution
2009-2010	Assistant Instructor	Department of Internal Medicine-Center for Hypothalamic Research	The University of Texas Southwestern Medical Center, Dallas, TX
2010-2012	Instructor	Department of Internal Medicine-Center for Hypothalamic Research	The University of Texas Southwestern Medical Center, Dallas, TX
2012-2019	Assistant Professor	Department of Internal Medicine-Center for Hypothalamic Research	The University of Texas Southwestern Medical Center, Dallas, TX
2019-present	Associate Professor (with tenure)	Department of Internal Medicine-Center for Hypothalamic Research	The University of Texas Southwestern Medical Center, Dallas, TX
2012-2019 (program dissolved)	Graduate Program Member	Integrative Biology	The University of Texas Southwestern Medical Center, Dallas, TX

2014-present	Graduate Program Member	Neuroscience	The University of Texas Southwestern Medical Center, Dallas, TX
2019-present	Graduate Track Member	Molecular Metabolism & Metabolic Disease (3MD)	The University of Texas Southwestern Medical Center, Dallas, TX

Honors and Awards

Year	Name of Honor/Award	Awarding Organization
1997	A.S. awarded with magna cum laude	Collin County Community College
1997-1999	UTD Redman scholars program recipient	Redman Foundation Scholarship
1999	B.S. awarded with cum laude	The University of Texas at Dallas
2001-2005	Louisiana Board of Reagents Support Fund (BORSF) Graduate Fellowship at Tulane University recipient	The Louisiana Board of Reagents
2004	Senior Vice President's award for excellence in research and presentation by a graduate student at Tulane Research Days.	The Tulane University of Louisiana
09/2015	The Novo Nordisk – Helmholtz Young Investigator Diabetes Award (HeIDI Award) Nominee	<p>The 3rd Helmholtz-<i>Nature Medicine</i> Diabetes Conference http://www.nature.com/natureconferences/hmgu2015/index.html September 19-21, 2015, Lenbach Palais, Munich, Germany Helmholtz Zentrum München, Germany</p> <p>This high impact conference brings together international top leaders in the field of diabetes to facilitate the identification of, and potential solutions to, the preeminent scientific challenges facing the prevention and treatment of type 2 diabetes. The conference features a focus on the brain in control of metabolism, and two award presentations: the Helmholtz Diabetes Lecture, in recognition of the lifetime achievements of a senior leader in the field, and the Novo Nordisk - Helmholtz Young Investigator in Diabetes (HeIDI) Award, in recognition of a rising star.</p>

07/2019	<p>Timothy J. Bartness Award</p> 	<p>This endowed award honors Dr. Timothy J. Bartness who was a Regent's Professor of Biology at Georgia State University and an eminent researcher of the neural control of adipose tissue, obesity and ingestive behaviour. He was a past-president of Society for the Study of Ingestive Behavior (2008-2009) and an ardent champion of early career investigators. In keeping with his tireless advocacy for junior scientists and dedication to mentorship, this award is given for the best oral presentation at the annual meeting by a junior faculty member. Members of SSIB.</p>
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Professional Societies *[List all society committees, leadership, and course leadership roles here]*

Dates	Society Name, member
2002-present	The Society for Neuroscience
2011-present	The Endocrine Society
2012-present	The American Heart Association
2012-present	The American Diabetes Association
2012-present	The Obesity Society
2017-present	The Society for the Study of Ingestive Behavior

Media Appearances

Dates	Title	Media Agency
December 11 th 2018	Here's What a Single Workout Can Do for Your Metabolism by Emily Cappiello	Readers Digest
December 11 th 2018	A single workout can benefit your health immediately	Good Morning San Diego
December 26 th 2018	Single Workout can boost metabolism for days	The Today Show
January 4 th 2019	Study Looks at Benefits of a Single Workout	NBCDFW
January 27 th 2019	Outrunning Hunger by Gretchen Reynolds	The New York Times Magazine

Grant Review Activities

Year(s)	Name of Review Committee	Organization
2014-present	American Heart Association SIGNALING 3 Peer Review Committee	American Heart Association
2015-present	American Diabetes Association Research Grant Review Committee (RGRC)-member	American Diabetes Association
2018-present	American Heart Association Fellowships Molecular Signaling & Cell Trans 2 Peer Review Committee - Chair	American Heart Association

Editorial Activities

Year(s)	Journal Name
<u>Editor/Associate Editor</u>	
2013	Guest Associate Editor – Frontiersin (http://www.frontiersin.org/) Host Research Topic – Central regulation of food intake, body weight, energy expenditure, glucose homeostasis, and reproduction (http://www.frontiersin.org/Neuroendocrine_Science/researchtopics/Central_regulation_of_food_int/975)
2019-present	Consulting Editor for JCI Insight
<u>Ad Hoc Reviewer</u>	
2008-present	The Journal of Neuroscience
2010-present	The Journal of Neurophysiology
2011-present	Molecular Neurobiology, Endocrinology
2013-present	Neuron, EMBO, Nature Communications
2014-present	The Journal of Clinical Investigation, AJP- Regulatory, Integrative and Comparative Physiology, The Journal of Biological Chemistry
2015-present	Journal of Neuroendocrinology, Molecular Metabolism, Diabetes, Cell Metabolism

Invited Lectures

Year(s)	Title	Location
<u>International</u>		
3/2012	HelmholtzZentrum munchen Deutsches Forschungszentrum fur Gesundheit und.Umwelt Seminar	Munich Germany
9/2012	Saitama University, Department of Regulatory Biology Seminar	Saitama, Japan
9/2012	Jichi Medical University Seminar	Jichi, Japan
9/2012	International Symposium of INPS (International Neuropeptide Society) Japanese branch jointed	Kitakyushu Convention Center (Kyushu Island) Japan

	with Japan Neuroendocrine Society (JNS)	
4/2014	Metabolism Symposium, Institute of Basic Medical Sciences, Peking Union Medical College (PUMC)	Beijing, PR China
4/2014	Institute for Nutritional Sciences, Chinese Academy of Sciences Seminar	Shanghai, PR China
4/2014	Health Sciences Center, Xi'an JiaoTong University Seminar	Xi'an, PR China
4/2014	National Institute of Biological Sciences Seminar	Beijing, PR China
4/2014	Symposium of Metabolism and Disease, Tsinghua University Host: Prof Peng Li	Beijing, PR China
9/2015	3 rd annual Helmholtz – Nature Medicine Diabetes Conference	Lenbach Palais, Munich, Germany
9/2016	17th International Congress of Endocrinology in collaboration with the 15th Annual Meeting of the Chinese Society of Endocrinology	Beijing, PR China
4/2017	Cold Spring Harbor Asia Conference - Lipid Metabolism & Metabolic Disorders	Suzhou, PR China
4/2017	Nanjing Biomedical Research Institution of Nanjing University – Metabolic Disease Seminar	Nanjing, PR China
4/2017	4 th , Wuhan International Cardiovascular and Metabolic Disease Forum	Wuhan, PR China
4/2017	Health Sciences Center, Xi'an JiaoTong University Seminar	Xi'an, PR China
8/2017	Neurobiology of Obesity Symposium	Aberdeen, Scotland, UK
9/2018	First Affiliated Hospital of Guiyang College of Traditional Chinese Medicine Seminar	Guangzhou, PR China
7/2019	Society for the Study of Ingestive Behavior	Utrecht, Netherlands
10/2019	Copenhagen Bioscience Conference - Metabolism in Action	Copenhagen, Denmark
11/2020	17 th Asia-Oceania Congress of Endocrinology and Congress of Endocrinology and Metabolism (AOCE-SICEM 2020)	Seoul, South Korea

National

2/2012	The University of Southern California – Department of Biological Sciences Human and Evolutionary Biology Seminar	Los Angeles, California, USA
3/2012	The University of Colorado Denver – Endocrine Research Conference	Denver, Colorado, USA
4/2012	Ninth symposium on growth and nutrition for children with chronic kidney disease. Official	San Diego, California USA

	symposium of the: International Pediatric Nephrology Association	
8/2012	The University of Iowa - The Department of Internal Medicine – Division of Cardiovascular Medicine Seminar	Iowa City, Iowa, USA
8/2013	Tulane University Department seminar series related to diabetes and metabolic diseases	New Orleans, Louisiana USA
8/2014	The University of Michigan – Seminar in the Department of Molecular & Integrative Physiology	Ann Arbor, Michigan, USA
11/2014	The Society for Neuroscience – nanosymposium “ <i>Brain Glucose and Energy-Sensing</i> ”	Washington D.C., USA
4/2015	Keystone Symposia – Neural Control of Metabolic Physiology and Diseases	Snowbird, Utah
6/2017	American Diabetes Association Annual Meeting	San Diego, California, USA
3/2018	Deuel Conference on Lipids	San Diego, CA, USA
3/2018	Endocrine Society's 100th Annual Meeting	Chicago, Illinois, USA
8/2018	FASEB - Nutrient Sensing and Metabolic Signaling	Snowmass, Colorado, USA
11/2018	Department of Physiology at Columbia University Medical Center	NYC, NY, USA
6/2019	American Diabetes Association Annual Meeting	San Francisco, California, USA
7/2019	The University of Mississippi – The Department of Physiology and Biophysics Seminar	Jackson, Mississippi, USA
9/2019	West Virginia University – The Department of Physiology and Pharmacology Seminar	Morgantown, West Virginia, USA
10/2019	The Obesity Society	Las Vegas, Nevada, USA
11/2019	The Society for Neurosports	Deerfield Beach, Florida, USA
11/2019	Children's Hospital Los Angeles Seminar	Los Angeles, California, USA
1/2020	The Winter Conference on Brain Research	Big Sky, Montana, USA

Regional/Local

1/2012	The University of Texas at El Paso Department of Biological Sciences Neurosciences & Metabolic Disorders Unit Seminar	El Paso, Texas, USA
3/2012	The University of North Texas Health Science Center – Department of Integrative Physiology Seminar	Fort Worth, Texas, USA
5/2013	The University of Texas Southwestern Medical Center – Nutrition Seminar Series	Dallas, Texas, USA
4/2014	The University of Texas Southwestern Medical Center – Neuroscience Department Retreat	Dallas, Texas, USA

10/2018	Nutrition Obesity Workshop (NOW) – Baylor College of Medicine	Houston, Texas, USA
11/2019	12th Annual Diabetes Management Conference	Dallas, Texas, USA

Bibliography

Peer-Reviewed Publications (*List in chronological order with complete pagination. Authors should be listed in the same order as they appear in the published article. Do not include abstracts or submitted works.*)

Original Research Articles

1.	Davis S.F., Williams K.W. , Xu W., Glatzer N.R., Smith B.N. (2003) Selective enhancement of synaptic inhibition by hypocretic (orexin) in rat vagal motor neurons: implications for autonomic regulation. <i>J. Neurosci.</i> 23:3844-54. PMID 12736355 PMCID: PMC3334280
2.	Davis S.F., Derbenev A.V., Williams K.W. , Glatzer N.R., Smith B.N. (2004) Excitatory and inhibitory local circuit input to the rat dorsal motor nucleus of the vagus originating from the nucleus tractus solitaries <i>Brain Res.</i> 1017:208-17. PMID 15261116 PMCID: PMC3761086
3.	Williams K.W. , Smith B.N. (2006) Rapid inhibition of neural excitability in the nucleus tractus solitarii by leptin: implications for ingestive behavior <i>J Physiol</i> 573:395-412. PMID 16581866 PMCID: PMC1779713
4.	Williams K.W. , Zsombok A., Smith B.N. (2007) Rapid inhibition of neurons in the dorsal motor nucleus of the vagus by leptin. <i>Endocrinology</i> 148:1868-81. PMID 17194747 PMCID: PMC1779713
5.	Hill JW, Williams K.W. , C. Ye, J. Luo, N. Balthasar, R. Coppari, M. A. Cowley, L. C. Cantley, B. B. Lowell, and J.K. Elmquist (2008) Acute effects of leptin require PI3K signaling in hypothalamic proopiomelanocortin neurons in mice. <i>J. Clin. Invest.</i> 118:1796-1805 (Hill J.W. and Williams K.W. are co–first authors). PMID: 18382766 PMCID: PMC2276395
6.	Ramadori G., Lee C.E., Bookout A.L., Lee S., Williams K.W. , Anderson J., Elmquist J.K., Coppari R. (2008) Brain SIRT1: anatomical distribution and regulation by energy availability. <i>J Neurosci</i> 28:9989-96. PMID: 18829956 PMCID: PMC2578850
7.	Xu, Y., J. E. Jones, D. Kohno, K. W. Williams , C. E. Lee, M.J. Choi, J. G. Anderson, L. K. Heisler, J. M. Zigman, B. B. Lowell and J. K. Elmquist (2008) 5-HT _{2c} Rs Expressed by Pro-opiomelanocortin Neurons Regulate Energy Homeostasis. <i>Neuron</i> 60:582-589. PMID: 19038216 PMCID: PMC2631191
8.	Gao H., Glatzer N.R., Williams K.W. , Derbenev A.V., Liu D., Smith B.N. (2009) Morphological and electrophysiological features of motor neuron and putative interneurons in the dorsal vagal complex of rats and mice. <i>Brain Res.</i> 1291:40-52 PMID: 19619517 PMCID: PMC2749465
9.	Willams K.W. , Margatho L.O., Lee C.E., Choi M., Lee S., Scott M.M., Elias C.F., Elmquist J.K. (2010) Marked segregation of acute leptin and insulin effects in distinct populations of arcuate POMC neurons. <i>J Neurosci.</i> 30(7):2472-9. PMID 20164331 PMCID: PMC2836776
10.	Hill J.W., Elias C.F., Fukuda M., Williams K.W. , Berglund E.D., Holland W/L., Cho Y.R., Chuang J.C., Xu Y., Choi M., Lauzon D., Lee C.E., Coppari R., Richardson J.A., Zigman J.M., Chua S., Scherer P.E., Lowell B.B., Brüning J.C., Elmquist J.K. (2010) Direct insulin and leptin action on pro-opiomelanocortin neurons is required for normal glucose homeostasis and fertility. <i>Cell Metab.</i> 11(4):286-97. PMID: 20374961 PMCID: PMC2854520

11.	Xu Y., Berglund E.D., Sohn J.W., Holland W.L., Chuang J.C., Fukuda M., Rossi J., Williams K.W. , Jones J.E., Zigman J.M., Lowell B.B., Scherer P.E., Elmquist J.K. (2010) 5-HT ₂ CRs expressed by pro-opiomelanocortin neurons regulate insulin sensitivity in liver. <i>Nat Neuroscience</i> . 13(12):1457-9. PMID: 21037584 PMCID: PMC3059249
12.	Fukuda M., Williams K.W. , Gautron L., Elmquist J.K. Induction of Leptin Resistance by Activation of cAMP-Epac Signaling (2011) <i>Cell Metab</i> 13(3):331-9. PMID: 21356522 PMCID: PMC3747952
13.	Scott M.M., Williams K.W. , Rossi J., Lee C.E., Elmquist J.K. Hindbrain leptin receptor regulation of food intake and metabolic homeostasis (2011) <i>J Clin. Invest.</i> 121(6):2413-21 (Scott MM and Williams KW are co-first authors). PMID: 21606595 PMCID: PMC3104740
14.	Klößener T., Hess S., Belgardt B.F., Paeger L., Verhagen L.A., Husch A., Sohn J-W., Hampel B., Dhillon H., Zigman J.M., Lowell B.B., Williams K.W. , Elmquist J.K., Horvath T.L., Kloppenburg P., Brüning J.C.. (2011) High-fat feeding promotes obesity via insulin receptor/PI3K-dependent inhibition of SF-1 VMH neurons. <i>Nat Neurosci</i> 14(7):911-8 PMID: 21642975 PMCID: 3371271
15.	Sohn J-W, Xu Y., Jones J.E., Wickman K., Williams K.W. , Elmquist J.K. (2011) Serotonin 2C receptor activates a distinct population of arcuate nucleus pro-opiomelanocortin neurons via TRPC channels. <i>Neuron</i> 71(3):488-97 (Williams KW and Elmquist JK are co-senior authors) PMID: 21835345 PMCID: PMC3184528
16.	Williams K.W. , Sohn J-W., Donato J. Jr, Lee C.E., Zhao J.J., Elmquist J.K., Elias C.F. (2011) The acute effects of leptin require PI3K signaling in the hypothalamic ventral premammillary nucleus <i>J. Neurosci.</i> 31(37):13147-56 (Williams KW and Elias CF are co-senior authors) PMID: 21917798 PMCID: PMC3319415
17.	Cui H., Sohn JW., Gautron L., Funahashi H., Williams K.W. , Elmquist J.K., Lutter M. (2012) Neuroanatomy of melanocortin-4 receptor pathway in the lateral hypothalamic area. <i>J. Comp Neurol</i> 520(18):4168-83 PMID: 22605619 PMCID: PMC3652326
18.	Sohn J-W., Harris L.E., Berglund E.D., Liu T., Vong L., Lowell B.B., Balthasar N., Williams K.W. , Elmquist J.K. (2013) Melanocortin 4 receptors reciprocally regulate sympathetic and parasympathetic preganglionic neurons <i>Cell</i> 152(3):612-619 (Balthasar N., Williams K.W. and Elmquist J.K. are co-senior authors) PMID: 23374353 PMCID: PMC3711728.
19.	Frazao R., Cravo R.M., Donato J. Jr, Clegg D., Elmquist J.K., Zigman J.M., Williams K.W. , Elias C.F. (2013) Shift in Kiss1 cell activity requires estrogen receptor α . <i>J Neurosci</i> 33(7):2807-20 (Williams K.W. and Elias C.F. are co-senior authors) PMID: 23407940 PMCID: PMC3713640.
20.	Cravo RM, Frazao R, Perello M, Osborne-Lawrence S, Williams KW , Zigman JM, Vianna C, Elias CF (2013) Leptin signaling in kiss1 neurons arises after pubertal development. <i>PLoS One</i> 8(3) PMID: 23505551 PMCID: PMC3591417
21.	Berglund ED, Liu C, Sohn JW, Liu T, Kim MH, Lee CE, Vianna CR, Williams KW , Xu Y, Elmquist JK (2013) Serotonin 2C receptors in pro-opiomelanocortin neurons regulate energy and glucose homeostasis. <i>J Clin Invest</i> 124(4):1868. PMID: 24177424 PMCID: PMC3859401.
22.	Frazao R, Dungan-Lemko H., Silva R.P., Ratra D.V., Lee C.E., Williams K.W. , Zigman J.M., Elias C.F. (2014) Estradiol modulates kiss1 neuronal response to ghrelin <i>Am J Physiol Endocrinol Metab.</i> 306(6):E606-14. PMID: 24473434 PMCID: PMC3948981
23.	Berglund ED, Liu T, Kong X, Sohn JW, Vong L, Deng Z, Lee CE, Lee S, Williams KW , Olson DP, Scherer PE, Lowell BB, Elmquist JK. (2014) Melanocortin 4 receptors in autonomic neurons regulate thermogenesis and glycemia. <i>Nat. Neurosci</i> Jun 8. PMID: 24908101 PMCID: PMC4090093.
24.	Williams KW , Liu T, Kong X, Fukuda M, Deng Y, Berglund ED, Deng Z, Gao Y, Liu T, Sohn

	J-W, Jia L, Fujikawa T, Kohno D, Scott MM, Lee S, Lee CE, Sun K, Chang Y, Scherer PE, Elmquist JK. (2014) Xbp1s in Pomc neurons connects ER stress with energy balance and glucose homeostasis. <i>Cell Metab</i> . 20(3):471-82 (Williams KW corresponding author) PMID: 25017942 PMCID:PMC4186248.
25.	Zhu Y, Gao Y, Tao C, Shao M, Zhao S, Huang W, Yao T, Johnson JA, Liu T, Cypess AM, Gupta O, Holland WL, Gupta RK, Spray DC, Tanowitz HB, Cao L, Lynes MD, Tseng YH, Elmquist JK, Williams KW , Lin HV, Scherer PE. (2016) <u>Connexin 43 Mediates White Adipose Tissue Beiging by Facilitating the Propagation of Sympathetic Neuronal Signals</u> . <i>Cell Metab</i> 24(3):420-33 PMID: 27626200
26.	Sohn J-W, Oh Y, Kim KW, Lee S, Williams KW , Elmquist JK (2016) Leptin and Insulin engage specific PI3K subunits in hypothalamic SF1 neurons. <i>Mol Metab</i> . 5(8):669-79 (Williams KW and Elmquist JK are co-senior authors) PMID: 27656404 .
27.	Sun J, Gao Y, Yao T, Huang Y, He Z, Kong X, Yu K-J, Wang R-T, Guo H, Yan J, Chang Y, Chen H, Scherer PE, Liu T, Williams KW . (2016) Adiponectin potentiates the acute effects of leptin in arcuate Pomc neurons. <i>Mol Metab</i> . 5(10):882-91 PMID: 27689001.
28.	Gao Y., Yao T., Deng Z., Sohn J-W, Sun J, Huang Y, Kong X, Yu K-J, Wang R-T, Chen H, Guo H., Yan J., Cunningham KA, Chang Y, Liu T, and Williams KW (2017) <i>TrpC5</i> mediates acute leptin and serotonin effects via <i>Pomc</i> neurons <i>Cell Reports</i> 18(3):583-592. PMID: 28099839
29.	Yao T, Deng Z, Gao Y, Sun Y, Kong X, Huang Y, He Z, Xu Y, Chang Y, Yu K-J, Findley BG, Berglund ED, Wang R-T, Guo H, Chen H, Li X, Kaufman RJ, Yan Jianqun, Liu T, Williams KW (2017) <i>Irela</i> in <i>Pomc</i> neurons is required for thermogenesis and glycemia. <i>Diabetes</i> 66(3):663-673. PMID: 28028078
30.	Mosialou I, Shikhel S, Liu JM, Maurizi A, Luo N, He Z, Huang Y, Zong H, Friedman RA, Barasch J, Lanzano P, Deng L, Leibel RL, Rubin M, Nicholas T, Chung W, Zeltser LM, Williams KW , Pessin JE, Kousteni S. (2017) MC4R-dependent suppression of appetite by bone-derived lipocalin 2. <i>Nature</i> 543(7645):385-390. PMID 28273060
31.	Huang Y, He Z, Gao Y, Lieu L, Yao T, Sun J, Liu T, Javadi C, Box M, Afrin S, Guo H, Williams KW . (2018) Phosphoinositide 3-Kinase Is Integral for the Acute Activity of Leptin and Insulin in Male Arcuate NPY/AgRP Neurons. <i>J Endocr Soc</i> 2(6):518-532. PMID 29850651
32.	He Z, Gao Y, Lieu L, Afrin S, Guo H, Williams KW . (2018) Acute effects of zinc and insulin on arcuate anorexigenic proopiomelanocortin neurons. <i>Br J Pharmacol</i> 176(5):725-736. PMID: 30521677 PMCID: PMC6365359
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34.	Ratner C, He Z, Gurnddal KV, Skov LJ, Harmann B, Zhang F, Feuchtinger A, Bjerregaard Anette, Christoffersen C, Tschop MH, Finan B, DiMarchi RD, Leininger G, Williams KW , Clemmensen C, Holst B (2019) Long acting neurotensin synergizes with liraglutide to reverse obesity through a melanocortin-dependent pathway. <i>Diabetes</i> PMID: 30936142 PMCID: PMC6610020
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39.	Pydi SP, Cui Z, He Z, Barella LF, Pham J, Cui Y, Oberlin DJ, Egritag HE, Urs N, Gavrilova O, Schwartz GJ, Buettner C, Williams KW, Wess J (2020) Beneficial metabolic role of β -arrestin-1 expressed by AgRP neurons. <i>Sci Adv</i> . PMID: 3253749
40.	Park S, Williams KW , Liu C, Sohn JW (2020) A neural basis for tonic suppression of sodium appetite. <i>Nat Neuroscience</i> . PMID: 31959933
41.	Torz LJ, Osborne-Lawrence S, Rodriguez J, He Z, Cornejo MP, Mustafá ER, Jin C, Petersen N, Hedegaard MA, Nybo M, Damonte VM, Metzger NP, Mani BK, Williams KW , Raingo J, Perello M, Holst B, Zigman JM. (2020) Metabolic insights from a GHSR-A203E mutant mouse model. <i>Mol Metab</i> . PMID: 32339772
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Reviews, Chapters, Monographs and Editorials

1.	Williams K.W. , Coppari R., Elmquist J.K. (2007) “Amping up” our understanding of the hypothalamic control of energy balance. <i>J. Clin. Invest</i> . 117:2089-92 (Commentary). PMID 17671647 PMCID: PMC1934582
2.	Williams K.W. , Scott M.M., Elmquist J.K. (2009) From Observation to Experimentation: leptin action in the mediobasal hypothalamus. <i>Am J Clin Nutr</i> . 89:985S-990S (Review). PMID 19176744 PMCID: PMC2667659
3.	Kim K.W., Sohn J.W., Kohno D., Xu Y., Williams K. , Elmquist J.K. (2010) SF-1 in the ventral medial hypothalamic nucleus: A key regulator of homeostasis. <i>Mol Cell Endocrinol</i> . Nov 24 (review) PMID: 21636788 PMCID: PMC3057357
4.	Williams K.W. , Scott M.M., Elmquist J.K. (2011) Modulation of the central melanocortin system by leptin, insulin, and serotonin: Co-ordinated actions in a dispersed neuronal network. <i>Eur J Pharmacology</i> . 660(1):2-12 (review) PMID: 21211525 PMCID: PMC3085544
5.	Williams K.W. , and Elmquist J.K. (2011) Lighting up the hypothalamus: coordinated control of feeding behavior. <i>Nat Neurosci</i> 14(3):277-8 (News and Views). PMID: 21346745 PMCID: PMC3755601
6.	Sohn J-W. and Williams K.W. (2012) Functional heterogeneity of arcuate pro-opiomelanocortin neurons: implications for diverging melanocortin pathways <i>Mol Neurobiol</i> Feb 12 PMID 22328135 PMCID: PMC3769497
7.	Williams K.W. Elmquist J.K. (2012) From neuroanatomy to behavior: central integration of

	peripheral signals regulating feeding behavior Nat Neurosci 15(10):1350-5 (Williams K.W. corresponding author) PMID: 23007190 PMCID: PMC3763714.
8.	Sohn JW, Elmquist JK, Williams KW (2013) Neuronal circuits that regulate feeding behavior and metabolism. Trends Neurosci 36(9):504-12. PMID: 23790727 PMCID: PMC3769497
9.	Liu T, Elmquist J.K., Williams K.W. (2013) Mrap2: An Accessory Protein Linked to Obesity. Cell Metab Preview 18(3):309-11. PMID 24011068 PMCID: PMC3930449.
10.	Scott MM, Xu Y, Elias CF, Williams KW (2014) Central regulation of food intake, body weight, energy expenditure, and glucose homeostasis. Front Neurosci 8:384 PMID: 25520610 PMCID: PMC4253741
11.	Gautron L, Elmquist JK, Williams KW (2015) Neural control of energy balance: translating circuits to therapies Cell 161(1):133-45 PMID: 25815991 PMCID: PMC4392840
12.	Yang D., Liu T, Williams KW (2015) Motivation to Eat-AgRP Neurons and Homeostatic Need Cell Metab 22(1):62-3 PMID: 26154054
13.	Shen WJ, Yao T, Kong X, Williams KW , Liu T. (2017) Melanocortin neurons: Multiple routes to regulation of metabolism Biochim Biophys Acta. S0925-4439(17) PMID: 28499988
14.	Lieu L, Chau D, Afrin S, Dong Y, Alhadeff AL, Betley JN, Williams KW. (2020) Effects of metabolic state on the regulation of melanocortin circuits. Physiol Behav. PMID: 32610101;
15.	Quarta C, Claret M, Zeltser LM, Williams KW , Yeo GSH, Tschop MH, Diano S, Bruning JC, Cota D (2021) POMC neuronal heterogeneity in energy balance and beyond: an integrated view. Nat. Metab PMID: 33633406

Books/Textbooks

1.	Kong X, Williams KW , Liu T. (2017) <u>Genetic Mouse Models: The Powerful Tools to Study Fat Tissues</u> . Methods Mol Biol. 1566:99-107. PMID: 28244044
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Proceedings of Meetings

1.	S.F.Davis, K.W. Williams , and B.N. Smith. An inhibitory connection between sensory and motor nuclei of the rat vagal complex is enhanced by hypocretin. Society for Neuroscience (2002)
2.	K.W. Williams and B.N. Smith. Inhibition of rat nucleus tractus solitarius neurons by leptin. Society for Neuroscience (2003)
3.	K.W. Williams and B.N. Smith. Leptin inhibits nucleus tractus solitarius neurons via a putative K ⁺ conductance. Society for Neuroscience (2004)
4.	K.W. Williams and B.N. Smith. Leptin inhibits neurons in the rat dorsal motor nucleus of the vagus nerve. Society for Neuroscience (2005)
5.	K.W. Williams , M.M. Scott, C.E. Lee, C.F. Elias, J.K Elmquist. Regulation of the Central Glucagon-like Peptide-1 System. Society for Neuroscience (2010)
6.	R. Frazao, R.M. Cravo, J. Donato Jr, J.K. Elmquist, J.M. Zigman, K.W. Williams , C.F. Elias. Biophysical properties of Kiss1 Neurons. Endo (2011)
7.	Williams K.W. , Sohn J-W, Donato J. Jr., Lee C.E., Zhao J.J., Elmquist J.K., Elias C.F. The acute effects of leptin require PI3K in the hypothalamic ventral premammillary nucleus. Society for Neuroscience (2011)
8.	Sohn J-W, Xu Y., Jones J.E., Wickman K., Williams K.W. , Elmquist J.K. (2011) Serotonin 2C receptor activates a distinct population of arcuate nucleus pro-opiomelanocortin neurons via TRPC channels. Society for Neuroscience (Williams KW and Elmquist JK are co-senior authors)

9.	Frazaio R., Dungan-Lemko H.M., Williams K.W. , Elias C.F. (2012) Ghrelin and leptin actions on Kiss1 cell activity. Society for Neuroscience.
10.	Liu T., Berglund E.D., Kong X., Sohn J-W., Vong L., Deng Z., Lee C.E., Lee S., Olson D.P., Balthasar N., Williams K.W., Scherer P.E., Lowell B.B., Elmquist J.K. (2014) Melanocortin 4 receptors in sympathetic pre-ganglionic neurons critically regulate thermogenic properties of adipose tissue. Keystone Symposium, Vancouver CA.
11.	Williams K.W. , Liu T., Fukuda M., Deng Y., Kong X., Berglund E.D., Deng Z., Sohn J-W., Sun K., Scherer P.E., Elmquist J.K. (2014) Endoplasmic reticulum stress induced acute leptin and insulin resistance in arcuate Pomc neurons: implications for obesity and type 2 diabetes. Keystone Symposium, Vancouver CA.
12.	Williams K.W. , Liu T., Fukuda M., Deng Y., Kong X., Berglund E.D., Deng Z., Sohn J-W., Sun K., Scherer P.E., Elmquist J.K. (2014) Xbp1s in Pomc neurons connects ER stress with energy balance and glucose homeostasis. American Diabetes Association, San Francisco, CA.

List of Trainees

Past Trainees

<u>Year(s)</u>	<u>Name</u>	<u>Positions in the Williams Lab</u>	<u>Current</u>
2009-2015	Chris Javadi	MSTP (MD/PhD) student – co-mentor with Joel K Elmquist	Resident, Department of General Surgery, Stanford Medical School
2009-2014	Jong-Woo Sohn	Postdoctoral Researcher - co-mentor with Joel K Elmquist	Assistant Professor, Department of Biological Sciences, KAIST
2013	Maria Box	Summer Undergraduate Research Fellow (SURF) student	undergraduate at Boston College
2013-2014	Zhuo Deng	Graduate Student	Attending Physician, Department of Obstetrics and Gynecology, 1st Affiliated Hospital of Medical School, Xi'an Jiaotong University
2013-2014	Tianya Liu	Graduate Student	PhD candidate, Suzhou University, PR China
2015-2016	Dengbao Yang	Postdoctoral Researcher	Postdoctoral Researcher, UT Southwestern
2015-2016	Yanchao Xu	Postdoctoral Researcher	Postdoctoral Researcher, UT Southwestern
2014-2016	Yong Gao	Assistant Professor	Professor, PI-WEI Institute, Guangzhou University of Chinese Medicine, Guangzhou, PR China
2016-2018	Jia Sun	Associate Professor	Southern Medical University, Guangzhou, PR China
2014-2018	Ting Yao	Graduate Student	Postdoctoral Researcher, UCLA
2016-2018	Yiru Huang	Graduate Student	Graduate Student, Fudan

			University, Shanghai, PR China
2016-2019	Zhenyan He	Graduate Student	Graduate Student, Southern Medical University, Guangzhou, PR China
2018-2019	Jianhong Cao	Graduate Student	Graduate Student, Pi-wei Institute, Guangzhou University of Chinese Medicine, Guangzhou, PR China

Current Trainees

<u>Year(s)</u>	<u>Name</u>	<u>Positions in the Williams Lab</u>	<u>Source of Funding</u>
2019-present	Yanbin Dong	Visiting Graduate Student	Supported by NIH Grant (Williams)
2019-present	Bo Chang	Visiting Graduate Student	Supported by NIH Grant (Williams)

Grant Support

<u>Current</u>	<i>NIH-NIDDK</i>
09/14-07/19	R01 – DK100699 - Central Mechanisms Regulating Acute Leptin and Insulin Signaling
	<i>Principal Investigator - Williams</i>
	<i>FY 2017 Direct Costs: \$225,000.00</i>
	<i>Total Direct Costs: \$1,125,000; Total Costs: \$1,788,750</i>
	<i>IPOD; 11th percentile; NoA 09/10/2014; NCE</i>
09/18-08/22	R01 – DK119169 – Cellular and Synaptic Reorganization After Exercise Training
	<i>Principal Investigator – Williams</i>
	<i>FY 2018 Direct Costs: \$250,000.00</i>
	<i>Total Direct Costs: \$1,000,000.00; Total Costs: \$1,617,000.00</i>
	<i>IPOD; 4th percentile; NoA 09/18/2018</i>
03/18-02/21	R01 – DK108833 - Sphingolipid-mediated dysregulation of glucose and energy homeostasis in the CNS
	<i>Principal Investigator – Holland – My Role: Sub-site PI (5% effort)</i>
09/19-08/24	P01 - DK119130 - CNS Mechanisms Linking Exercise Training with Energy Balance and Metabolism
	<i>Principal Investigator – Elmquist – My Role: Project 3 PI</i>

	<i>FY Direct Costs: \$280,000 (impact score 26; NOA 09/20/2019)</i>
<u>Past</u>	
01/15-12/16	<i>American Heart Association – (Declined)</i>
	<i>Beginning Grant in Aid</i>
	<i>Principal Investigator - Williams</i>
	<i>Total Direct Costs: \$140,000.00</i>
04/10-03/13	<i>NIH-NIDDK</i>
	<i>K01 - Genetic Dissection of Endoplasmic Reticulum Stress in POMC Neurons</i>
	<i>Principal Investigator - Williams</i>
	<i>Total Direct Costs: \$330,154.00</i>
09/06-08/09	<i>NIH-NIDDK</i>
	<i>F32 - Genetic Dissection of the Central GLP-1 System</i>
	<i>Principal Investigator - Williams</i>
	<i>Total Direct Costs: \$140,468.00</i>