

FULL NAME AND DEGREES: Maribel Rios, Ph.D.

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EDUCATION

1988 B.A., Boston University, Boston, Massachusetts

1997 Ph.D., Cell, Molecular, and Developmental Biology, Sackler School of Biomedical Sciences, Tufts University School of Medicine, Boston, Massachusetts

POST DOCTORAL TRAINING

1997-2002 Neuroscience, Post doctoral associate with Dr. Rudolph Jaenisch, Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology, Cambridge, MA

ACADEMIC APPOINTMENTS

2002-2010 Assistant Professor, Department of Neuroscience, Tufts University School of Medicine Boston, MA

2010-pres. Associate Professor with Tenure, Department of Neuroscience, Tufts University School of Medicine Boston, MA

AWARDS AND HONORS

1991-1996 Minority Access Research Council (MARC) F31 Predoctoral Fellowship, National Institutes of Health

1997-2001 Minority Research Supplement, National Institutes of Health

2002 Role Model in Biomedical Research Award from Minority Access, Inc

2003-2005 Sloan Research Fellowship, Alfred P. Sloan Foundation

2016 The Milton and Natalie Zucker Award for Outstanding Faculty Research Achievement

PROFESSIONAL SOCIETIES

Society for Neuroscience

Society for the Advancement of Chicanos and Native Americans in Science

American Association for the Advancement of Science

American Diabetes Association

NATIONAL and INTERNATIONAL SERVICE

2008-2009 *Ad hoc* reviewer, NIH Molecular Neuropharmacology and Signaling (MNPS) Study Section Review Panel

3/3/2009 Poster Session Judge, New England Science Symposium, Harvard Medical School

2009 *Ad hoc* reviewer, NIH Biobehavioral Regulation, Learning and Ethology Study Section Review Panel

2010 *Ad hoc* reviewer, NIH Member conflict Special Emphasis Panel

2010 *Ad hoc* reviewer, NIH Endocrinology and Obesity Special Emphasis Panel

2011 *Ad hoc* reviewer, NIH Drug Discovery for the Nervous System Special Emphasis Panel

- 2012 *Ad hoc* grant reviewer, Neurophysiology of Systems, Medical Research Council, United Kingdom
- 2012 *Ad hoc* grant reviewer, The Netherlands Organization for Scientific Research, The Netherlands
- 2013 *Ad hoc* reviewer, NIH Integrative Physiology of Obesity and Diabetes (IPOD) Study Section
- 2013-15 Member, Review Panel for the Davis Family Foundation for Eating Disorders Research
- 2014-Pres. Member, Review Panel for the Klarman Family Foundation for Eating Disorders Research
- 8/2015 *Ad hoc* reviewer, Puerto Rico Science Trust Grant Program
- 10/2015 *Ad hoc* reviewer, NIH Integrative Physiology of Obesity and Diabetes (IPOD) Study Section
- 2015-pres Undergraduate Student mentor, NIH Endure Program at University of Puerto Rico
- 2016-pres. Member, Advisory Committee for the Klarman Family Foundation for Eating Disorders Research Grant Program
- 2016-2019 Member, American Diabetes Association, Research Grant Review Committee
- 6/2016 *Ad hoc* reviewer, NIH Integrative Physiology of Obesity and Diabetes (IPOD) Study Section
- 11/2016 *Ad hoc* reviewer, NIH Special Emphasis Panel ZRG1 IFCN-L (02)
- 12/2017 *Ad hoc* reviewer, NINDS Special Emphasis Panel ZNS1 SRB-M (03)
- 3/13/2018 *Ad hoc* reviewer, NINDS Special Emphasis Panel ZDK1 GRB-J M3 P01
- 5/2018 *Ad hoc* reviewer, NIDDK Catalyst Awards in Diabetes, Endocrinology, and Metabolic Diseases
- 2018-2022 Charter Member, NIH Integrative Physiology of Obesity and Diabetes (IPOD) Study Section

TRAINING OF GRADUATE AND UNDERGRADUATE STUDENTS/POST DOCTORAL FELLOWS

DOCTORAL THESIS RESEARCH

- 2002-2007 Jason Chan, Neuroscience Graduate Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. degree. Current position: Assistant Professor of Biology, Juniata College, Huntingdon, PA
- 2002-2007 Thaddeus Unger, Cellular and Molecular Physiology Graduate Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. degree. Current position: Scientist, Karyopharm Therapeutics, Newton, MA
- 2003-2010 Sarah Teillon, Neuroscience Graduate Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. candidate. Current position: Analyst, Medis Consulting, Morristown, NJ
- 2007-2012 Joshua Cordeira, Neuroscience Graduate Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. candidate. Current Position: Assistant Professor, Western Connecticut State Univ. Danbury, CT
- 2011-2016 Jennifer Felsted, Graduate Program in Biochemical and Molecular Nutrition, School of Nutrition, Tufts University. Current Position: Program Manager, Data Science and Analytics, Partners Healthcare, Boston, MA
- 2011-2015 Laura Gainey, MD/Ph.D. Program, TUSM. Current Position: Resident in Obstetrics and Gynecology, Hofstra University, Hempstead, NY
- 2012-2017 Micaella Panessiti, Neuroscience Graduate Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. candidate. Current Position: Scientist 1, Zafgen Inc., Boston, MA
- 2016- Dominique Ameroso, Neuroscience Graduate Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. candidate. In training
- 2018- Alice Meng, CMBD Program, Sackler School for Biomedical Sciences, TUSM, Ph.D. candidate. In training
- 2019- Stella Chen, MD/Ph.D. Program, TUSM. In training

POSTDOCTORAL

- 2007-2014 Shabrine Daftary-Bussiere, Ph.D., Post Doctoral Associate, Dept. of Neuroscience, TUSM
- 2010-2012 Grace Lee, Ph.D., Post Doctoral Associate, Dept. of Neuroscience, TUSM. Current Position: Assistant Faculty Associate, University of Wisconsin, Madison
- 2012-2013 Jesus Mena, Ph.D., Post Doctoral Associate, Dept. of Neuroscience, TUSM. Current position: Scientist II, Biomodels LLC, Watertown, MA
- 2018- Yasemin Onder, Post Doctoral Associate, Dept. of Neuroscience, TUSM. In training

MEDICAL FACULTY RESEARCH MENTORING

- 2008-2012 Shadi Malaeb, MD, Assistant Professor of Pediatrics, Tufts Medical Center. Current Position: Assistant Professor, Drexel University College of Medicine

TEACHING RESPONSIBILITY

NEUROSCIENCE TRAINING PROGRAM, SACKLER SCHOOL OF BIOMEDICAL SCIENCES

- 2003-2008 Lecturer, Neuroscience 201 Course, Sackler School of Biomedical Sciences, TUSM
- 2004-2008 Lecturer, Neuroscience 205 Course, Sackler School of Biomedical Sciences, TUSM
- Jan 2004 Facilitator, Journal club (Neuroscience 292), Neuroscience graduate program, TUSM
- Jan 2006 Facilitator, Journal club (Neuroscience 292), Neuroscience graduate program, TUSM
- 2008-2012 Lecturer, Neuroscience 212, Sackler School of Biomedical Sciences, TUSM
- 2012-2016 Lecturer, Cellular and Molecular Tutorials in Neuroscience, Sackler School of Biomedical Sciences, TUSM
- 2011-2012 Course Co-Director, Neuroscience 212, Sackler School of Biomedical Sciences, TUSM
- 2012-Pres. Course Co-director, Neuroscience 310 (Systems Neuroscience), Sackler School of Biomedical Sciences, TUSM
- 2012-Pres. Course Co-director and Lecturer, Neuroscience 312 (Tutorials in Neural Systems and Disease Mechanisms), Sackler School of Biomedical Sciences, TUSM

CMDB TRAINING PROGRAM, SACKLER SCHOOL OF BIOMEDICAL SCIENCES

- 2003- PRES. Lecturer, Pathobiology CMP230 Course, Sackler School of Biomedical Sciences, TUSM

TUFTS UNIVERSITY SCHOOL OF MEDICINE

- 2003-2010 Instructor, Medical Neuroscience Laboratory, TUSM
- March 2006 Facilitator, Reading Selectives, MD/Ph.D. Program, TUSM
- October 2013 Facilitator, Research Selectives, MD/Ph.D. Program, TUSM
- February 2018 Facilitator, Research Selectives, MD/Ph.D. Program, TUSM

SCHOOL OF NUTRITION, TUFTS UNIVERSITY

- 2011-Pres. Lecturer, Macronutrient Physiology and Biochemistry, School of Nutrition, Tufts University

RESEARCH SUPPORT

ACTIVE:

Grant title: **Sex-specific effects of mGluR5 in the VMH influencing glucose homeostasis (R01DK113445)**

Funding Agency: NIH/NIDDK

Period: 09/14/2017-08/31/2020

Role: PI (35% effort)

Grant title: **BDNF signaling in VMH astrocytes mediating energy and glucose balance control (R01 DK117935)**

Funding Agency: NIH/NIDDK

Period: 04/01/2019-03/30/2024

Role: PI (35% effort)

Grant title: **Synaptic and Circuit Mechanisms of Fear Suppression (1R01MH104589)**

Funding Agency: NIH/NIMH

Period: 08/05/2017-05/31/2022

Role: Collaborator (5% effort), PI: Leon Reijmers

Grant title: **Tufts Post-Baccalaureate Research Education Program (R25GM066567)**

Funding Agency: NIH

Period: 05/01/09-07/31/2020

Role: Trainee Advisor and Executive Council Member

COMPLETED:

Grant title: **The role of alpha2/delta-1 in the regulation of glucose homeostasis (1-16-IBS-247)**

Funding Agency: American Diabetes Assoc.

Period: 1/1/2016-12/31/2018

Role: PI (10% effort)

Grant title: **The role of BDNF in VMH astrocytes influencing energy balance (R21 NS091871)**

Funding Agency: NIH/NINDS

Period: 9/1/15-8/31/17

Role: PI (25% effort)

Grant title: **Effects of BDNF on the mesolimbic dopamine system influencing food intake (1 F31 DK097937-01A1)**

Funding Agency: NIH/NINDS

Period: 4/1/13-3/31/17

Role: Mentor of Trainee - Laura Gainey

Grant title: **Molecular Approaches to Therapeutics Against Diabetes and Obesity**

Funding Agency: Tufts Collaborates

Period: 7/1/16-6/30/17

Role: Collaborator

Grant title: **BDNF and TrkB-containing neuronal circuits mediating energy balance (R01 DK073311)**

Funding Agency: NIDDK/NIH

Period: 9/1/07 – 7/30/15

Role: PI (30% effort)

Grant title: **BDNF and TrkB-containing neuronal circuits mediating energy balance (R01 DK073311S1)**

Funding Agency: NIDDK/NIH
Period: 1/1/13 – 1/1/15
Role: PI

Grant title: **Investigations of cellular and molecular mechanisms underlying the effects of BDNF on restricted food intake and binge eating**

Funding Agency: Klarman Family Foundation Grants Program in Eating Disorders
Period: June 1, 2011 – May 31, 2013
Role: PI (25% effort)

Center for Neuroscience Research at Tufts University, Pilot Project Award

Grant title: The role of hypothalamic brain-derived neurotrophic factor (BDNF) in BPA-induced obesity
Period: 7/12 – 7/13
Role: Co-PI (with Dr. Beverly Rubin)

Grant title: **Examination of the role of brain-derived neurotrophic factor in binge eating behavior**

Funding Agency: Klarman Family Foundation Grants Program in Eating Disorders
Period: June 1, 2008 – May 31, 2010
Role: PI (30% effort)

Grant title: **BDNF mutants: Genetic models for depression and anxiety disorders (R01 MH67817)**

Funding Agency: NIMH/NIH
Period: 4/1/03-1/31/09
Role: PI

Grant title: **BDNF and TrkB-containing neuronal circuits mediating energy balance**

Funding Agency: American Heart Association
Period: 7/1/2007 - 6/30/2010 (Award resigned on 8/31/2007 due to receiving overlapping NIH funding)
Role: PI

Grant title: **Sloan Research Fellowship**

Funding Agency: Alfred P. Sloan Research Foundation
Period: 9/16/03 – 9/15/2005
Role: PI

Grant title: **The effects of dietary induced obesity on cognitive behavior and BDNF in young rats**

Funding Agency: Center for Neuroscience Research at Tufts University, Pilot Project Award
Period: 03/08-06/09
Role: Co-PI

Grant title: **Serotonergic modulation of basolateral amygdala neurons in BDNF conditional mutant mice**

Funding Agency: Center for Neuroscience Research at Tufts University, Pilot Project Award
Period: 1/08 – 6/30/08
Role: PI

Grant title: **Modulation of pancreatic and intestinal function by brain-derived neurotrophic factor**

Funding Agency: GRASP at Tufts University, Pilot Project Award
Period: 9/15/2002 – 11/30/03
Role: PI

Grant title: **Brain-derived neurotrophic factor as a regulator of energy balance**

Funding Agency: GRASP at Tufts University, Pilot Project Award
Period: 11/1/2005 – 11/30/2006
Role: PI

EDITORIAL BOARDS AND ACTIVITY

Ad hoc reviewer for:

Science
Journal of Neuroscience
PNAS
Nature Communications
Human and Molecular Genetics
Plos Biology
eLife
Journal of Neurobiology
Biological Psychiatry
Journal of Cell Biology
American Journal of Physiology: Endocrinology and Metabolism
Experimental Neurology
Neuropsychopharmacology
Brain Research
Developmental Neuroscience
Cerebral Cortex
Journal of Neurochemistry
Molecular Neurobiology
Nature Metabolism

Publications

1. Panessiti M, Ameroso D, Rock A, Maguire J, Rios M. (2019) Essential and sex-specific effects of mGluR5 in the ventromedial hypothalamus regulating estrogen signaling and glucose and lipid homeostasis. In review
2. Felsted J, Meng A, Rios M. (2019). Bimodal effects of alpha2delta-1 in the female ventromedial hypothalamus influencing metabolic function. In review
3. Felsted J, Chien CH, Wang D, Panessiti M, Ameroso D, Greenberg A, Feng G, Kong D and Rios M. alpha2delta-1 in SF1⁺ neurons of the ventromedial hypothalamus is an essential regulator of glucose and lipid homeostasis. (2017) *Cell Reports* 21: 2737-2747
4. Antila H, Casarotto P, Popova D, Sipila P, Guirado R, Kohtala S, Ryazantseva M, Vesa L, Lindholm J, Yalcin I, Sato V, Nurkkala H, Lempriere S, Cordeira J, Autio H, Kislin M, Rios M, Joca S, Khiroug L, Lauri S, Varjosalo M, Grant S, Taira T, Castren E, Rantamaki T. (2017) Isoflurane produces antidepressant effects and induces TrkB signaling in rodents. *Sci Rep* 7:7811
5. Allen PJ, DeBold JF, Rios M, Kanarek RB. (2015) Chronic high-dose creatine has opposing effects on depression-related gene expression and behavior in intact and sex hormone-treated gonadectomized male and female rats. *Pharmacol. Biochem Behav.* 130:22-33
6. Cordeira JW, Felsted J, Teillon S, Daftary-Bussiere S, Wirth J, Sena-Esteves M, Rios M. (2014). Hypothalamic dysfunction of the calcium channel $\alpha 2\delta$ -1 subunit underlies the overeating and obesity triggered by BDNF deficiency. *Journal of Neuroscience* 34(2): 554-65
7. Malaeb S, Davis J, Pinz I, Newman J, Dammann O, Rios M. (2014) Effect of sustained postnatal Inflammation on Hippocampal volume and function in mice. *Pediatric Research* 76:363-9

8. Wu Y, Tu Q, Zhang J, Murray D, Dong L, Cheng J, Jiang H, Rios M, Morgan E, Xu T, Tang Z, Chen J. (2014) Central adiponectin administration reveals new regulatory mechanisms for bone metabolism in mice. *AJP: Endocrinology and Metabolism* 306 (12):E1418-30
9. Vithlani M., Hines R, Zhong P, Terunuma M, Hines D, Revilla-Sanchez R, Jurd R, Haydon P, Rios M, Brandon N, Yan Z, Moss S. (2013) The ability of BDNF to modify neurogenesis and depressive-like behaviors is dependent upon phosphorylation of tyrosine residues 365/367 in the GABAAR γ 2 subunit. *Journal of Neuroscience* 33: 15567-15577
10. Daftary-Bussiere S, Calderon G and Rios M. (2012) Essential role of brain-derived neurotrophic factor in the regulation of serotonin transmission in the basolateral amygdala. *Neuroscience* 224:125-34
11. Camerino C, Zayzafoon M, Rymaszewski, Heiny J, Rios M, Hauschka PV. (2012) Central depletion of BDNF in mice results in high bone mass and metabolic phenotype. *Journal of Endocrinology* 153:5394-405
12. Di Lieto A, Rantamaki T, Vessa L, Yanpallewar S, Antila H, Lindholm J, Rios M, Tessarollo L, Castren E. (2012). The responsiveness of TrkB to BDNF and antidepressant drugs is differentially regulated during mouse development. *PLoS ONE* 7(3):e32869. Epub 2012 Mar 2.
13. Rantamaki T, Vesa L, Antila H, Di Lieto A, Tammela P, Schmitt A, Lesch KP, Rios M, Castren E. (2011). Antidepressant drugs transactivate TrkB neurotrophin receptors in the adult rodent brain independently of BDNF and monoamine transporter blockade. *PLoS ONE* 6(6):e20567. Epub 2011 Jun 7.
14. Klein AB, Williamson R, Santini MA, Clemmensen C, Etrup A, Rios M, Knudsen GM, Aznar S (2011). Blood BDNF concentrations reflect brain tissue BDNF levels across species. *International Journal of Neuropsychopharmacology* Apr;14(3):347-53
15. Cordeira J, Frank L, Sena-Esteves M, Pothos E, and Rios M (2010). Brain-derived neurotrophic factor regulates hedonic feeding by acting on the mesolimbic dopamine system. *Journal of Neuroscience* 30(7): 2533-41 - Evaluated and placed by Faculty 1000 in their library of top 2% of published articles in biology and medicine.
16. Teillon S, Calderon G, and Rios M (2010) Diminished diet-induced hyperglycemia and dyslipidemia and enhanced expression of PPAR- α and FGF-21 in mice with hepatic ablation of brain-derived neurotrophic factor *Journal of Endocrinology* 205(1): 37-47
17. Klein AB, Santini MA, Aznar S, Knudsen GM, Rios M. (2010) Changes in 5-HT_{2A}-mediated behavior and 5-HT_{2A} and _{1A} receptor binding and expression in BDNF conditional mutant mice. *Neuroscience* Sep 1;169(3):1007-16.
18. Gourley S, Howell J, Rios M, DiLeone R, Taylor J. (2009). Prelimbic cortex bdnf knock-down reduces instrumental responding in extinction. *Learning and Memory Journal* 16(12): 756-760
19. Chan JP, Cordeira J, Calderon G, Iyer LK and Rios M. (2008). Depletion of central BDNF in mice impedes terminal differentiation of new granule neurons in the adult hippocampus. *Molecular and Cellular Neuroscience* 39:372-383
20. Unger TJ, Calderon G, Bradley LC, Sena-Estevéz M, Rios M. (2007). Selective deletion of *Bdnf* in the ventromedial and dorsomedial hypothalamus of adult mice results in hyperphagic behavior and obesity. *Journal of Neuroscience* 27(52):14265-74
21. Graham DL, DiLeone RJ, Rios M, Self DW. (2007). Dynamic BDNF activity in the Nucleus Accumbens with cocaine use increases self-administration and relapse. *Nature Neuroscience* 10, 1029 – 1037
22. Rios M, Lambe E, Liu RJ, Teillon S, Liu J, Akbarian S, Roffler-Tarlov S, Jaenisch R, Aghajanian G. (2006). Severe deficits in 5-HT_{2A}-mediated neurotransmission in BDNF conditional mutant mice. *Journal of Neurobiology* 66:408-420
23. Chan JP*, Unger TJ*, Byrnes J, Rios M. (2006). Examination of behavioral deficits triggered by targeting *Bdnf* in fetal or postnatal brains of mice. *Neuroscience* 142(1):49-58
24. Berton O, McClung C, Dileone RJ, Krishnan V, Renthal W, Russo SJ, Graham D, Tsankova NM, Bolanos C, Rios M, Monteggia LM, Self DW, Nestler EJ. (2006) Essential role of BDNF in the mesolimbic dopamine pathway in social defeat stress. *Science* 311:864-8
25. Zhao J, Seereeman A, Nassar MA, Levato A, Pezet S, Hathaway G, Morenilla-Palao C, Fitzgerald M, McMahan SB, Rios M, Wood J. (2006) Nociceptor-derived Brain derived-neurotrophic factor regulates acute and inflammatory but not neuropathic pain. *Molecular and Cellular Neuroscience* Mar;31(3):539-48

26. Lyckman A, Fan G, Rios M, Jaenisch R, and Sur, M. (2005) Normal eye-specific patterning of retinal inputs to subcortical visual nuclei in the absence of brain derived neurotrophic factor. *Visual Neuroscience* 22: 27-36
27. Portbury AL, Chandra R, McMillian MK, Groelle M, Elias A, Herlong JR, Rios M, Roffler-Tarlov S, and Chikaraishi DM. (2003) Catecholamines act via a β -like adrenergic receptor to maintain fetal heart rate and survival. *Am J Physiol Heart Circ Physiol* 284: H2069-77
28. Rios M, Akbarian S, Liu RJ, Jones K, Tesarrollo L, Nestler E, Aghajanian G, Jaenisch R. (2002) Brain derived neurotrophic factor is essential for opiate-induced plasticity of noradrenergic neurons. *Journal of Neuroscience*. 22:4153-62
29. Rios M, Fan G, Fekete C, Kelly J, Bates B, Kuehn R, Lechan R, Jaenisch R. (2001) Conditional deletion of brain derived neurotrophic factor leads to obesity and hyperactivity. *Molecular Endocrinology* 15:1748-1757
30. Tian H, Habecker B, Guidry G, Gurtan A, Rios M, Roffler-Tarlov S, Landis SC. (2000) Catecholamines Are Required for the Acquisition of Secretory Responsiveness by Sweat Glands. *Journal of Neuroscience* 19:7362-7369
31. Bates B, Rios M, Trumpp A, Chen C, Fan G, Bishop JM, Jaenisch R. (1999) Neurotrophin-3 is required for proper cerebellar development. *Nature Neuroscience* 2:115-7
32. Rios M, Habecker B, Sasaoka T, Eisenhofer G, Tian H, Landis S, Chikaraishi D, Roffler-Tarlov S. (1999) Catecholamine synthesis is mediated by tyrosinase in the absence of tyrosine hydroxylase. *Journal of Neuroscience* 19:3519-26
33. Williams DA, Rios M, Stephens C, Patel VP. (1991) Fibronectin and VLA-4 in haematopoietic stem cell-microenvironment interactions. *Nature* 352:438-41
34. Rios M, Williams DA. (1990). Systematic analysis of the ability of stromal cell lines derived from different murine adult tissues to support maintenance of hematopoietic stem cells *in vitro*. *Journal of Cellular Physiology* 145:434-4

Invited Reviews:

1. **Rios M.** (2011) New insights into mechanisms underlying the effects of BDNF on eating behavior. *Neuropsychopharmacology*. Jan;36(1):368-9
2. Cordeira J and **Rios M.** (2011) Weighing in the role of BDNF in the central control of eating behavior. *Molecular Neurobiology* 44(3): 441-8
3. **Rios M.** (2013) BDNF and the central control of feeding: Accidental bystander or essential player? *Trends in Neuroscience*. *Trends in Neurosciences* 36(2):83-90 (Invited review in TINS Special Issue: Neural Control of Appetite)

Book Chapters:

1. **Rios M.** Synaptic plasticity in feeding circuits. In Handbook of Developmental Neural Plasticity. M Chao, Ed. Oxford University Press. *In preparation*
2. **Rios M.** Neurotrophins and the Regulation of Energy Balance and Body Weight. In Handbook of Experimental Pharmacology. GR Lewin and BD Carter, Eds. Springer-Verlag Berlin Heidelberg (2014)
3. Roffler-Tarlov S. and **Rios M.** Catecholamines before nervous activity. In: Handbook on Brain and Behavior in Human Development. A. Gramsbergen and A. Kalverboer, Eds. Kluwer Academic Publishers. (2001)

Invited lectures

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| 1/2004 | Oregon Health and Science University, Portland, Oregon |
| 2/2004 | University of Puerto Rico, Cayey Campus, Cayey, PR |

3/2004 New England Medical Center, Endocrinology Division, Boston, MA

11/2004 Department of Pharmacology, Tufts University School of Medicine, Boston, MA

3/2006 Keystone Symposium, Gut Hormones and Other Regulators of Appetite, Satiety and Energy Expenditure, Santa Fe, New Mexico

10/2007 University of Copenhagen, Denmark

3/2008 Cardiovascular and Metabolic Diseases Division, Wyeth Research, Cambridge, MA

5/2008 Psychiatry Grand Rounds, Tufts Medical Center, Boston, MA

10/2009 Society for Neuroscience Annual Meeting, Chicago, IL, Minisymposium "The Neuroscience of Hedonics in Dietary Obesity and Eating Disorders".

3/2010 Volen National Center for Complex Systems, Brandeis University, Waltham, MA

6/2010 NGF 2010: Neurotrophic Factors in Health and Disease, Helsinki, Finland

3/2011 Neuroscience Program, New York University

4/2012 Neuroscience Program, Univ. of Wisconsin, Madison

5/2012 Dept. of Physiology and Biophysics, Stony Brook University Medical Center

3/2013 "Mechanisms of Neurotrophic Factors in Health and Disease", Salamanca, Spain, Invited Speaker and Session Chair

5/2013 Cell Press LabLinks Symposium "Appetite and the Brain". Boston, MA

1/2014 Winter Conference on Brain Research, Steamboat Springs, Colorado

4/2015 Keystone Symposium, "*Neural Control of Metabolic Physiology and Diseases*", Snowbird, Utah

6/2015 Neurotrophin Gordon Conference, Newport, RI

4/2016 University of Michigan

5/2016 University of Puerto Rico

11/2017 Maine Society for Neuroscience Annual Meeting, Keynote Speaker

11/2019 Department of Physiology and Pharmacology, Oregon Health and Science University

11/2019 Department of Pharmacology, University of Iowa

4/2020 Department of Molecular Pharmacology, Albert Einstein College of Medicine, NY