

TROY A. ROEPKE

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EDUCATION:

UNIVERSITY OF CALIFORNIA at DAVIS, Davis, CA
Ph.D. in Physiology, Designated Emphasis: Reproductive Biology, September 2005

SAN FRANCISCO STATE UNIVERSITY, San Francisco, CA
M.A. in Biology: Marine Biology, January 2002

LONG ISLAND UNIVERSITY, SOUTHAMPTON COLLEGE, Southampton, NY
B.S. in Marine Science/Biology, August 1992

ACADEMIC APPOINTMENTS:

2020-Present Graduate Program Director, Endocrinology and Animal Biosciences
2019-Present Member, Environmental & Occupational Health Science Institute, Rutgers University
2019-Present Associate Member, Food Sciences Graduate Program, Rutgers University
2019-Present Member, Center for Lipid Research, Rutgers University
2019-Present Member, Center for Nutrition, Microbiome, and Health, Rutgers University
2018-Present Associate Professor, Department of Animal Sciences, School of Environmental and Biological Sciences, Rutgers University
2017-Present Member, NIEHS Center for Environmental Exposures and Disease, Rutgers University
2016-Present Member, Brain Health Institute, Rutgers University
2016-Present Member, New Jersey Institute for Food, Nutrition, and Health, Rutgers University
2013-Present Member, Joint Graduate Program in Toxicology, Rutgers University
2012-Present Member, Nutritional Sciences Graduate Program, Rutgers University
2012-Present Member, Neuroscience Graduate Program, Rutgers University
2012-Present Member, Endocrinology & Animal Biosciences Graduate Program, Rutgers University
2011-2018 Assistant Professor, Department of Animal Sciences, School of Environmental and Biological Sciences, Rutgers University

RESEARCH EXPERIENCE:

2005–2011 Postdoctoral Fellow, Department of Physiology and Pharmacology, Oregon Health & Science University (OHSU)
Advisor: Drs. Martin J. Kelly & Oline K. Rønnekleiv
2001–2005 Graduate Research Assistant, Bodega Marine Laboratory, University of California–Davis
Advisor: Dr. Gary N. Cherr
1997–1999 Graduate Research Assistant, Romberg Tiburon Center for Environmental Studies, San Francisco State University (SFSU)
Advisor: Drs. Alissa Arp and David Julian
1993–1994 Graduate Research Assistant, University of Texas Marine Science Institute
Advisor: Dr. Curtis Suttle

HONORS and AWARDS:

2011 Travel Fellow Award, Winter Conference on Brain Research

2010	Oral Presentation Award, FASEB Summer Research Conference: The Physiology of Integrated Nuclear and Extranuclear Steroid Signalling
2008	Young Investigators Travel Award, International Symposium on Steroid Hormone Receptors and Neural Sex Differences, September 8-12, Gifu, Japan
2005–2007	NIH–National Institute on Drug Abuse (NIDA) Postdoctoral Trainee Fellowship: Biological Bases of Drug Seeking Behavior, 5-T32-DA007262, OHSU
2002–2004	NIH–NIEHS Trainee Fellowship, 5-T32-ES07059, UC-Davis
2001–2002	National Sea Grant Biotechnology Program Trainee, Bodega Marine Laboratory, UC-Davis
1999–2001	Physiology Graduate Group Graduate Student Fellowship, UC-Davis
1998–1999	Graduate Assistance in Areas of National Need (GAANN) Fellowship, SFSU

GRANTS:

Current Research Support

NIH/NIMH R01MH123544	Co-PI: Roepke/Samuels	06/11/20 – 03/31/25
Sex differences in CRH signaling in the ovBNST underlie effects of chronic stressors		
Total Costs: \$2,156,376		
NJ Institute of Food, Nutrition, and Health	Co-PI: Roepke/Roopchand	10/01/19 – 09/30/21
Interactions of dietary fatty acids, sex steroids, and gut microbiota may predict chronic disease in menopausal females		
Total Costs: \$219,500		
NJ Institute of Food, Nutrition, and Health	PI: Bello, Co-PI: Roepke	10/01/19 – 09/30/21
Mechanisms underlying increased fat deposition induced by early life perturbations		
Total Costs: \$225,500		
USDA/NIFA NJ06195	PI: Roepke	10/01/18 – 09/30/23
The impact of maternal exposure to flame-retardants and high-fat diets on adult offspring energy balance		
Total Costs: \$17,500		
1R01AT008933	PI: Bello (Co-I: Roepke, 10%)	05/01/17 – 04/30/22
Effects of raspberry ketone on body weight and metabolic outcomes in obesity		
Total Costs: \$1,679,056		

Completed Research Support

P30ES005022	PI: Uzumcu/Roepke	07/25/18 – 03/31/19
Adverse effects of di-2-ethylhexyl phthalate (DEHP) and its replacement diisononyl phthalate (DINP) on glucose homeostasis and obesity in female rats		
NIEHS Center for Environmental Exposure and Disease Pilot Project Grant		Total Costs: \$25,000
1R21ES027119	PI: Roepke	03/01/17 – 02/28/19
Disruption of arcuate gene expression and neuronal activity by OPFR		
Total Costs: \$423,390		
3R21ES027119-01A1S1	PI: Roepke	09/15/17 – 02/28/19
Disruption of arcuate gene expression and neuronal activity by OPFR		
<i>Research Supplement to Promote Diversity in Health-Related Research</i>		Total Costs: \$116,121
RU ONE Nutrition Pilot Project	PI: Roepke	07/01/17 – 08/31/18
The selective knockout of growth hormone secretagogue receptor in kisspeptin neurons		
Total Costs: \$20,000		

USDA/NIFA NJ06107	PI: Roepke	07/01/12 – 06/30/17
The integration of hormonal and central signals and the impacts of endocrine disrupting chemicals		Total Costs: \$15,000
P30ES005022	PI: Roepke	07/25/16 – 03/31/17
Effects of maternal exposures to OPFR on offspring energy homeostasis		Total Costs: \$21,000
NIEHS Center for Environmental Exposure and Disease Pilot Project Grant		
P30ES005022	PI: Roepke	02/01/16 – 03/31/16
Measurement of organophosphate flame-retardants in urine from pregnant women		Total Costs: \$5,000
NIEHS Center for Environmental Exposure and Disease Pilot Project Grant		
3R00DK083457-05S1	PI: Roepke	01/01/14 – 12/31/15
Estrogen regulation of channels involved in the control of energy homeostasis		
Supplements to Recover Losses Due to Hurricane Sandy under the Disaster Relief Appropriations Act		
		Total Costs: \$214,873

TEACHING:

Department of Animal Sciences, Rutgers University

Animal Reproduction, Reproductive and Developmental Toxicology, Lab Animal Practicum

Endocrinology and Animal Biosciences Graduate Program

Reproductive and Developmental Toxicology, Recent Advances in Endocrinology, Physiology of Reproduction

Rutgers University

Exploring Graduate School (SEBS), Academic Mentoring (SEBS), Integrative Organ Physiology (School of Pharmacy)

PUBLICATIONS:

Journal Articles (refereed) – Research articles

2020 Pu Hu, P., Phan, M., Maita, I., Gu, E., Kwok, C., Gergues, M., Kelada, F., Dieterich, A., Qi, X-R., Swaab, D.F., Liu, J., Lucassen, P.J., **Roepke, T.A.**, and Samuels, B.A. Early-life Stress Activates Corticotropin-Releasing Hormone Signaling and Increases Cellular Excitability in the Adult Mice Oval Bed Nucleus of Stria Terminalis, **Translational Psychiatry**, *in press*.

Walley, S.N., Krumm, E.A., Yasrebi, A., Kwiecinski, J., Baker, C., and **Roepke, T.A.** Maternal organophosphate flame-retardant exposure alters offspring metabolism in a sexually-dimorphic manner in mice. **Journal of Applied Toxicology**, *in press*.

Walley, S.N., Krumm, E.A., Yasrebi, A., O’Leary, S., Tillery, T., and **Roepke, T.A.** Maternal organophosphate flame-retardant exposure alters offspring feeding, locomotor, and exploratory behaviors in a sexually-dimorphic manner. **Journal of Applied Toxicology**, *in press*.

Vail, G.M., Yasrebi, A., Maeng, A., Walley, S.N., Conde, K., and **Roepke, T.A.** The interactions of diet-induced obesity and OPFR exposure on energy homeostasis in adult male and female mice. **Journal of Toxicology and Environmental Health**, *83(11-12):438-455*.

Wiersielis, K.R., Adams, S., Yasrebi, A., Conde, K., & **Roepke, T.A.** Maternal exposure to organophosphate flame-retardants alters locomotor and anxiety-like behavior in male and female adult offspring. **Hormones and Behavior**, *122:104759*.

- Conde, K. and **Roepke, T.A.**, 17 β -estradiol increases arcuate KNDy neuronal sensitivity to ghrelin inhibition of the M-current in female mice. **Neuroendocrinology**. 110(7-8):582-594.
- Adams, S., Wiersielis, K.R., Yasrebi, A., Conde, K., Armstrong, L., Guo, G.L., and **Roepke, T.A.** Sex- and age-dependent effects of maternal organophosphate flame-retardant exposure on neonatal hypothalamic and hepatic gene expression. **Reproductive Toxicology**, 94:65-74.
- Hu, P., Liu, J., Maita, I., Kwok, C., Gu, E., Gergues, M., Kelada, F., Phan, M., Zhou, J-N., Swaab, D., Pang, Z., Lucassen, P., **Roepke, T.A.**, and Samuels, B.A. Chronic Stress Induces Maladaptive Behaviors by Activating Corticotropin-Releasing Hormone Signaling in the Mouse Oval Bed Nucleus of the Stria Terminalis. **The Journal of Neuroscience**, 40(12):2519-2537.
- Mamounis, K.J., Shvedov, N.R., Margolies, N., Yasrebi, A., and **Roepke, T.A.** The effects of dietary fatty acids in the physiological outcomes of maternal high-fat diet on offspring energy homeostasis in mice. **J Dev Orig Health Dis**. 11(3):273-284.
- Roepke, T.A.**, Yasrebi, A., Villalobos, A., Krumm, E.A., Yang, J.A., and Mamounis, K.J. The loss of ERE-dependent ER α signaling potentiates the effects of maternal high-fat diet on energy homeostasis in female offspring fed an obesogenic diet. **J Dev Orig Health Dis**. 11(3):285-296.
- 2018 Mamounis, K.J., Hernandez, M., Margolies, N., Yasrebi, A., and **Roepke, T.A.** Interaction of 17 β -estradiol and fatty acids on energy and glucose homeostasis in females. **Nutritional Neuroscience**. 21(10):715-728.
- Krumm, E.A., Patel, V., Tillery, T., Yasrebi, A., Shen, J., Guo, G., Marco, S.M., Buckley, B.T., and **Roepke, T.A.** Organophosphate flame-retardants alter adult homeostasis and gene expression in a sex-dependent manner in the mouse potentially through interactions with ER α . **Toxicological Sciences**. 162(1):212-224.
- 2017 **Roepke, T.A.**, Yasrebi, A., Villalobos, A., Krumm, E.A., Yang, J.A., and Mamounis, K.J. Loss of ER α partially reverses the effects of maternal high-fat diet on energy homeostasis in female mice. **Scientific Reports**. 7(1):6381.
- Yasrebi, A., Rivera, J.A., Krumm, E.A., Yang, J.A., and **Roepke, T.A.** Activation of estrogen response element-independent ER α signaling protects female mice from diet-induced obesity. **Endocrinology** 158(2):319-334.
- Yang, J.A., Stires, H., Belden, W., and **Roepke, T.A.** The arcuate estrogen-regulated transcriptome: estrogen response element-dependent and -independent signaling of ER α in female mice. **Endocrinology** 158(3):612-626.
- Mamounis, K.J., Yasrebi, A., and **Roepke, T.A.** Linoleic acid causes greater weight gain than saturated fat without hypothalamic inflammation in the male mouse. **Journal of Nutritional Biochemistry** 40:122-131.
- 2016 Yang, J.A., Snyder, M, Yasrebi, A., and **Roepke, T.A.** The interactions of fasting, caloric restriction, and diet-induced obesity with 17 β -estradiol on KNDy neuropeptides and their receptors in the female mouse. **Molecular and Cellular Endocrinology** 437:35-50.
- Hu, P., Liu, J., Yasrebi, A., Gotthard, J.D., Bello, N.T., Pang, Z., and **Roepke, T.A.** G protein-coupled membrane-initiated estrogen signaling rapidly excites corticotropin-releasing hormone

neurons in the hypothalamic paraventricular nucleus in female mice. **Endocrinology** 157:3604-3620.

Roepke, T.A., Yang, J.A., Yasrebi, A, Mamounis, K., Oruc, E., Zama, A., and Uzumcu, M. Regulation of arcuate genes by developmental exposures to endocrine-disrupting compounds in female rats exposed during development. **Reproductive Toxicology** 62:18-26.

Yang, J.A., Yasrebi, A., Mamounis, K. and **Roepke, T.A.** Regulation of gene expression by 17 β -estradiol in the arcuate nucleus of the mouse through ERE-dependent and ERE-independent mechanism. **Steroids** 107:128-138.

Gotthardt, J.D., Verpeut, J.L., Yeomans, B.L., Yang, J.A., Yasrebi, A., Roepke, T.A., and Bello, N.T. Intermittent fasting promotes fat loss with lean mass retention, increased hypothalamic norepinephrine content, and increased neuropeptide Y gene expression in diet-induced obese male mice. **Endocrinology** 157:679-691.

Yasrebi, A., Hsieh, A., Mamounis, K.J., Krumm, E.A., Yang, J.A., Magby, J., Hu, P., and **Roepke, T.A.** Differential gene regulation of GHSR signaling pathway in the arcuate nucleus and NPY neurons by fasting, diet-induced obesity and 17 β -estradiol. **Molecular and Cellular Endocrinology** 422:42-56.

2014 Mamounis, K., Yang, J. Yasrebi, A. and **Roepke, T.A.** Estrogen response element-independent signaling partially restores post-ovariectomy body weight gain but is not sufficient for 17 β -estradiol's control of energy homeostasis. **Steroids** 81:88-98.

2012 Ropero, A.B., Alonso-Magdalena, P., Soriano, S., Juan-Picó, P., **Roepke, T.A.**, Kelly, M.J. and Nadal, A. Insulinotropic effect of the non-steroidal compound STX in pancreatic β -cells. **PLoS ONE** 7(4):1-11 e34650.

Roepke, T.A., Smith, A.W., Rønnekleiv, O.K. and Kelly, M.J. Serotonin 5HT_{2C} receptor-mediated inhibition of the M-current in hypothalamic POMC neurons. **American Journal of Physiology Endocrinology and Metabolism** 302(11):E1399-E1406.

2011 **Roepke, T.A.**, Qiu, J., Smith, A.W, Rønnekleiv, O.K. and Kelly, M.J. Fasting and 17 β -estradiol differentially modulate the M-current in neuropeptide Y neurons. **Journal of Neuroscience** 31(33):11825-11835.

2010 **Roepke, T.A.***, Bosch, M.A.*, Rick, E.A., Lee, B., Wagner, E.J., Seidlova-Wuttke, D., Wuttke, W., Scanlan, T.S., Rønnekleiv, O.K. and Kelly, M.J. Contribution of a membrane estrogen receptor to the estrogenic regulation of body temperature and energy homeostasis. **Endocrinology** 151(10):4926-4937. *Co-first authors.

2008 **Roepke, T.A.**, Xue, C., Bosch, M.A., Scanlan, T.S., Kelly, M.J and Rønnekleiv, O.K. Genes associated with membrane-initiated signaling of estrogen and energy homeostasis. **Endocrinology** 149(12):6113-6124.

- Zhang, C., **Roepke, T.A.**, Kelly, M.J. and Rønnekleiv, O.K. Kisspeptin depolarizes gonadotropin-releasing hormone neurons through activation of TRPC-like cationic channels. **Journal of Neuroscience** 28(17):4423-4434.
- Xu, C.*, **Roepke, T.A.***, Zhang, C., Rønnekleiv, O.K. and Kelly, M.J. Gonadotropin-releasing hormone (GnRH) activates the M-current in GnRH neurons: an autoregulatory negative feedback mechanism? **Endocrinology** 149(5):2459-2466. *Co-first authors.
- 2007 **Roepke, T.A.**, Malyala, A., Bosch, M.A., Kelly, M.J. and Rønnekleiv, O.K. Estrogen regulation of genes important for K⁺ channel signaling in the arcuate nucleus. **Endocrinology** 148(10):4937-4951.
- 2006 **Roepke, T.A.**, Hamdoun, A.M. and Cherr, G.N. Increase in multidrug transport activity is associated with oocyte maturation in sea stars. **Developmental Growth and Differentiation** 48(9):559-573.
- Roepke, T.A.**, Chang, E.S. and Cherr, G.N. Maternal exposure to estradiol and endocrine disrupting compounds alters the sensitivity of sea urchin embryos and the expression of an orphan steroid receptor. **Journal of Experimental Zoology** 305A:830-841.
- 2005 Julian, D., Statile, J., **Roepke, T.A.** and Arp, A.J. Sodium nitroprusside potentiates hydrogen-sulfide-induced contractions in body wall muscle from a marine worm. **Biology Bulletin** 209(1):6-10.
- Roepke, T.A.**, Snyder, M.J. and Cherr, G.N. Estradiol and endocrine disrupting compounds adversely affect development of sea urchin embryos at environmentally relevant concentrations. **Aquatic Toxicology** 71(2):155-173.
- 2004 Hamdoun, A.M., Cherr, G.N., **Roepke, T.A.** and Epel, D. Activation of multidrug efflux transporter activity at fertilization in sea urchin embryos (*Strongylocentrotus purpuratus*). **Developmental Biology** 276(2):452-462.
- Journal Articles (refereed) – Review articles*
- 2020 Wiersielis, K.R., Samuels, B.A., and **Roepke, T.A.** Perinatal exposure to endocrine-disrupting compounds at the intersection of stress, anxiety, and depression. **Neurotoxicology and Teratology**, 79:106884.
- 2019 Vail, G., and **Roepke, T.A.** Membrane-initiated estrogen signaling via Gq-coupled GPCR in the central nervous system. **Steroids** 142:77-83.
- 2018 Acevedo-Rodriguez, A., Kauffman, A.S., Cherrington, B.D., Laconi, M., Borges, C.S., and **Roepke, T.A.** Emerging insights into hypothalamic-pituitary-gonadal (HPG) axis regulation and interaction with stress signaling. **Journal of Neuroendocrinology** 30(10):e12590.
- Walley, S., and **Roepke, T.A.** Perinatal exposure to endocrine disrupting compounds and the control of feeding behavior—an overview. **Hormones and Behavior** 101:22-28.
- 2011 **Roepke, T.A.**, Rønnekleiv, O.K. and Kelly, M.J. Physiological consequences of membrane-initiated estrogen signaling in the brain. **Frontiers in Biosciences** 16:1560-1573.

2009 **Roepke, T.A.**, Qiu, J., Bosch, M.A., Rønnekleiv, O.K. and Kelly, M.J. Cross-talk between membrane-initiated and nuclear-initiated oestrogen signalling in the hypothalamus. **Journal of Neuroendocrinology** 21(4):263-270.

Roepke, T.A. Oestrogen modulates hypothalamic control of energy homeostasis through multiple mechanisms. **Journal of Neuroendocrinology** 21(2):141-150. *Young Investigator Perspective*.

IN REVIEW:

2020 Vail, G.M., and **Roepke, T.A.** Organophosphate flame retardants excite arcuate melanocortin circuitry and increase sensitivity to ghrelin in adult mice. **Endocrinology**, *in revision*.

INVITED PRESENTATIONS:

Invited Addresses, Seminars, and Award Presentations

2020 The Neurophysiological Impact of Organophosphate Flame Retardant Exposure in the Hypothalamus of Adult Mice. Interdepartmental Toxicology Graduate Program, Iowa State University, September 15, 2020, virtual seminar

ER α modulates feeding behaviors by ERE-dependent and -independent signaling in female mice. Society of Behavioral Neuroendocrinology, Atlanta, June 29, 2020. – canceled due to COVID pandemic

Chair of Symposium: Focus on Females: Sex-specific regulation of feeding, drinking, sleeping, and fighting. Society of Behavioral Neuroendocrinology, Atlanta, June 29, 2020. – canceled due to COVID pandemic

2019 Interactions of OPFR Exposure and Diet on Energy Balance in Adult Mice. Department of Neuroscience, Virginia Polytechnic Institute and State University, Blacksburg, VA, September 18, 2019.

Modulation of KNDy-mediated Neuroendocrine Functions by Ghrelin. Neuroscience Graduate Program, Hunter College CUNY, New York, NY, October 25, 2019.

ERE-independent ER α signaling in feeding and exploratory behaviors. Department of Psychology, Saint Joseph's University, Philadelphia, PA, November 5, 2019.

The interactions of 17 β -estradiol and ghrelin signaling in KNDy neuronal activity and neuroendocrine functions. Department of Animal Science, North Carolina State University. Raleigh, NC, April 17.

2018 Sex Differences in Metabolic Disturbances due to Maternal Exposure to Organophosphate Flame Retardants. Prenatal Programming and Toxicity VI, Torshavn, Faroe Islands. May 27-30.

Maternal Exposures to Estrogenic Endocrine Disrupting Compounds and Their Effects on Adults Offspring Energy Homeostasis. Society of Toxicology, San Antonio, TX. March 11-15.

2017 Convergence of Membrane-Initiated and Nuclear-Initiated Estrogen Signaling in Regulating the Expression and Activity of a Potassium Current. 2017 International Workshop in Neuroendocrinology, Cacán, Chile. August 6-9.

Disruption of Energy Homeostasis in Adult Mice Due to Exposures to Organophosphate Flame-Retardants. Department of Environmental Health Sciences, School of Public Health and Health Sciences, University of Massachusetts Amherst. Amherst, MA, March 20.

The Convergence of Membrane-initiated and Nuclear-initiated Estrogen Signaling on a Potassium Channel. Department of Psychology and Neuroscience, Temple University, Philadelphia, PA. March 29.

2016 The Blood Brain Barrier: Obesity and EDC. National Institute for Environmental Health Sciences (NIEHS) Obesity Grantee Meeting, Bethesda, MA. September 21-22.

Membrane-initiated Estrogen Signaling in Hypothalamic CRH Neurons is mediated by a Gq-coupled mER. 9th International Conference on the Rapid Responses to Steroid Hormones, Richmond, VA. November 2-5.

2015 Organizational and activational effects of estrogen in energy homeostasis. The Yin/Yang of Estrogen Signaling in the Control of Energy Homeostasis. Experimental Biology, Boston, MA. March 28-April 1.

2013 Regulation of hypothalamic functions by ERE-dependent and ERE-independent mechanisms. 8th International Conference on the Rapid Responses to Steroid Hormones, Erie, PA. September 19-22.

POSTER PRESENTATIONS:

2020 Wiersielis K, Yasrebi A, Conde K, Roepke TA. Intermittent fasting alters cognitive processing and anxiety-like behavior in male and female mice. Pavlovian Society, September 10-11, virtual.

2019 Conde, K., Vanschaik, A., Sun, Y., and Roepke, T.A. KNDy neuronal sensitivity to ghrelin and the impact of 17beta-estradiol. Society for Behavioral Neuroendocrinology. Bloomington, IN, June 19-22, 2019.

Wiersielis, K., Ramirez, P., Yasrebi, A., Regan, D., and Roepke, T.A. The influence of ER α -mediated ERE-dependent and ERE-independent signaling on behavioral assessments of mood and cognition in female mice. Society for Behavioral Neuroendocrinology. Bloomington, IN, June 19-22, 2019.

Adam, S., Yasrebi, A., and **Roepke, T.A.** Sex- and age-dependent effects of maternal OPFR exposure on hypothalamic and liver gene expression in neonates. Society of Toxicology, Baltimore, MD, March 10-14.

Wiersielis, K., Adam, S., Yasrebi, A., and **Roepke, T.A.** Maternal Exposure to Organophosphate Flame-Retardants and Anxiety-like Behavior. Society of Toxicology, Baltimore, MD, March 10-14.

Vail, G., Yasrebi, A., and **Roepke, T.A.** Adult exposure to organophosphate flame retardants disrupts energy homeostasis and activity. Society of Toxicology, Baltimore, MD, March 10-14.

2018 Yasrebi, A., Regan, D., and **Roepke, T.A.** Comparing feeding and exploratory behaviors between WT and ER α KO male and female mice. 9th International Congress of Neuroendocrinology, Toronto, Canada, July 15-18.

Conde, K., and **Roepke, T.A.** Ghrelin inhibition of the M-current in KNDy neurons and the impact of 17 β -estradiol. 9th International Congress of Neuroendocrinology, Toronto, Canada, July 15-18.

- Walley, S.N., Yasrebi, A., and **Roepke, T.A.** The effects of maternal exposure to organophosphate flame-retardants on offspring feeding and exploratory behaviors. Society of Toxicology, San Antonio, TX, March 11-15.
- Vail, G., and **Roepke, T.A.** The effects of organophosphate flame retardants on the M-current in NPY neurons in adult mice. Society of Toxicology, San Antonio, TX, March 11-15.
- 2017 Yasrebi, A., Regan, D., and **Roepke, T.A.** The role of ER α -mediated ERE-dependent and ERE-independent signaling in feeding and exploratory behaviors in male and female mice. Society for Neuroscience, Washington, D.C., November 11-15.
- Vail, G., and **Roepke, T.A.** The effects of organophosphate flame retardants on the M-current in NPY neurons in adult mice. Society for Neuroscience, Washington, D.C., November 11-15.
- Conde, K., and **Roepke, T.A.** Ghrelin inhibition of the M-current in KNDy neurons and the impact of 17 β -estradiol. Society for Neuroscience, Washington, D.C., November 11-15.
- Walley, S.N., Yasrebi, A., and **Roepke, T.A.** The effects of maternal exposure to organophosphate flame-retardants on offspring feeding and exploratory behaviors. Society for Neuroscience, Washington, D.C., November 11-15.
- 2016 Patel, V., Krumm, E.A., Tillery, T., Yasrebi, A., Shen, J., Guo, G., and **Roepke, T.A.** Adult Exposure to Flame Retardants Alters Energy Homeostasis, Peptide Hormone Levels and Hypothalamic and Liver Gene Expression. National Institute for Environmental Health Sciences (NIEHS) 25 Years of Endocrine Disruption Research: Past Lessons and Future Directions, Bethesda, MA. September 21-22.
- 2015 Yang, J.A., Yasrebi, A., Snyder, M., and **Roepke, T.A.** Regulation of KNDy neuronal gene expression in the arcuate nucleus of the mouse by 17 β -estradiol, fasting and diet. Society for Behavioral Neuroendocrinology, Pacific Grove, CA. June 10-14.
- Mamounis K.J. and **Roepke, T.A.** Obesity and Hypothalamic Inflammation from High Fat Diets of Different Fatty Acid Profile. Experimental Biology, Boston, MA. March 28-April 1.
- 2014 Yang, J.A., Mamounis, K.J., Yasrebi, A., and **Roepke, T.A.** Regulation of gene expression by 17beta-estradiol in the arcuate nucleus of the mouse through ERE-dependent and ERE-independent mechanisms, Society for Neuroscience, Washington, D.C., November 15-19.
- Krumm, E.A., Yasrebi, A., Yang, J.A., Mamounis, K.J., and **Roepke, T.A.** The role of ERalpha signaling in the effects of maternal obesity on adult offspring energy homeostasis, Society for Neuroscience, Washington, D.C., November 15-19.
- Yasrebi, A., Hsieh, A., Mamounis, K.J., Krumm, E.A., J. A. Yang, J.A., and **Roepke, T.A.** Regulation of GHSR signaling pathway in the arcuate nucleus and NPY neurons by fasting, diet-induced obesity and 17beta-estradiol in mice. Society for Neuroscience, Washington, D.C., November 15-19.
- Gilens, J.F. and **Roepke, T.A.** Effects of Developmental Exposure to Nonylphenol and alpha-Zearalenol on Adult Energy and Glucose Homeostasis. Perinatal Programming and Toxicology IV, Boston, MA, October 25-29.
- 2013 Yang, J.A., Yasrebi, Ali, Mamounis, K., and **Roepke, T.A.** Regulation of gene expression by

17 β -estradiol in the arcuate nucleus of the mouse through ERE-dependent and ERE-independent mechanisms. 8th International Conference on the Rapid Responses to Steroid Hormones, Erie, PA. September 19-22,

2011 **Roepke, T.A.**, Smith, A.W., Rønnekleiv, O.K. and Kelly, M.J. Serotonin 5HT_{2C} receptor-mediated inhibition of the M-current in hypothalamic POMC neurons. Society for Neuroscience, Washington, DC, November 12-16

POSTDOCTORAL FELLOWS AND GRADUATE STUDENTS:

Postdoctoral researchers

Name, Degree	Years	Project Topic
Jason Magby	2012-2014	Control of arcuate neuronal excitability by modulation of the M-current
Pu Hu	2014-2015	Gq-mER mediates E ₂ 's rapid effects on hypothalamic CRH neurons
Kimberly Wiersielis	2018-Present	Interactions of estrogens and EDC on exploratory and social behaviors

Graduate students – Primary advisor (Rutgers)

Student	Years	Deg	Graduate Program	Project Topic
Kristine Conde	2017-	PhD	Neuroscience	The interaction of 17 β -estradiol and ghrelin on KNDy neuronal excitability and hypothalamic control of reproduction and energy homeostasis in female mice
Thomas Degroat	2020-	PhD	Endocrinology & Animal Biosciences	The influence of BNST ER α underlying the sex differences in the response to chronic stressors

Former Graduate students – Primary advisor (Rutgers)

Student	Years	Deg	Graduate Program	Project Topic
Gwyndolin Vail	2015-2020	PhD	JGP in Toxicology	The neuroendocrine and physiological impact of organophosphate flame retardants on energy homeostasis in adult mice
Ali Yasrebi	2016-2019	MS	Endocrinology and Animal Biosciences	The role of ERE-independent, ER α signaling in feeding and exploratory behaviors in male and female mice
Sabrina Walley	2016-2019	MS	JGP in Toxicology	Effects of maternal exposures to organophosphate flame-retardants on energy homeostasis, behavior and addiction
Kyle Mamounis	2012-2017	PhD	Nutritional Sciences	The metabolic effects of linoleic acid versus saturated fat in male mice, female mice and offspring exposed maternally
Jennifer Yang	2012-2016	PhD	Endocrinology & Animal Biosciences	Arcuate ER α -mediated estrogen signaling pathways and regulation of KNDy-associated gene expression in female mice
Elizabeth Krumm	2013-2015	MS	Endocrinology & Animal Biosciences	Effects of flame retardants on arcuate gene expression and energy homeostasis in mice

Graduate students – Member of dissertation committee (Rutgers)

Student	Years	Deg	Graduate Program (Advisor)	Project Topic
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Isabella Maita	2020- Present	PhD	Neuroscience (Benjamin Samuels)	
Gregory Berger	2020- Present	PhD	Endocrinology & Animal Biosciences (Nicholas Bello)	
Ke Sui	2019- Present	PhD	Food Science (Diana Roopchand)	
Xinyi Li	2019- Present	PhD	Nutritional Sciences (Nicholas Bello)	Influence of the locus coeruleus in mediating individual differences in obesity and opioid misuse
Jennifer Schaefer	2019- Present	PhD	JGP in Toxicology (Andy Babwah)	
Chelsee Holloway	2017- Present	PhD	Endocrinology & Animal Biosciences (Loredonna Quadro)	Beta carotene metabolism the maternal heart during pregnancy
John Szilagyi	2015- 2018	PhD	JGP in Toxicology (Lauren Aleksunes)	Regulation of BCRP/ABCG2 and its role in placental protection from xenobiotics
Stephanie Marco	2016- 2019	PhD	JGP in Toxicology (Brian Buckley)	Pharmacokinetics of organophosphate flame-retardants
Miguel Carbera	2017- 2018	PhD	Endocrinology & Animal Biosciences (Dipak Sarkar)	Fetal Alcohol Exposure Induces Neurotoxic Effects on β -Endorphin Neurons Through Microglial Activation
Kate Annunziato	2016- 2018	PhD	JGP in Toxicology (Keith Cooper)	Effects of polyfluorinated compounds on early zebrafish development
Juliet Gotthardt	2014- 2017	PhD	Nutritional Sciences (Nicholas Bello)	Effects of intermittent caloric deprivation on metabolic and neural parameters in diet induced obese male mice
Ashley George	2014- 2018	PhD	Endocrinology & Animal Biosciences (Carol Bagnell)	Maternal programming of the neonatal porcine uterus
Seher Yirtici	2014- 2016	MS	Endocrinology & Animal Biosciences (Mehmet Uzumcu)	Effects of developmental exposure to estrogenic endocrine-disrupting chemicals methoxychlor and bisphenol A during fetal and neonatal periods on ovarian folliculogenesis and reproductive parameters in rats
Jamie Moscovitz	2015- 2016	PhD	JGP in Toxicology (Lauren Aleksunes)	Enterohepatic nuclear receptor signaling during pregnancy
Hillary Stires	2013- 2016	PhD	Endocrinology & Animal Biosciences (Wendie Cohick)	Fetal alcohol exposure alters the estradiol and IGF-I systems to promote mammary tumorigenesis
Arpita Bhurke	2013- 2015	MS	Endocrinology & Animal Biosciences (Mehmet Uzumcu)	Delayed and transgenerational effects of BPA in the ovary
Jessica Verpeut	2012- 2015	PhD	Endocrinology & Animal Biosciences (Nicholas Bello)	Feeding-related noradrenergic alterations in <i>Engrailed 2</i> knockout mice
<i>Graduate students – Member of dissertation committee (External)</i>				
Student	Years	Deg	Graduate Program (Advisor)	Project Topic
Zahra Adahman	2020- Present	PhD	Neuroscience, Rutgers Newark (Vanessa Routh)	Neural circuits for social behavior adaptations to environmental temperature

Pamela Hirschberg	2019-Present	PhD	Neuroscience, Rutgers Newark (Vanessa Routh)	nNOS-GI v1VMH neurons inhibition of LH orexin neurons to control BAT and thermogenesis
Mary Regis Shanley	2019-Present	PhD	Biology, Hunter College (Allyson Freidman)	The role of estrogens in the neurophysiology of VTA dopamine neurons

UNDERGRADUATE STUDENTS:

Undergraduate students: supervised in Research in Animal Sciences, Aresty, or George H. Cooks Scholars

Student	Semesters	Major	Project Topic
Pauline Chen	Sp'12, F'12, Sp'13	Animal Science	NA
Josh Gilens	F'12-Sp'14	Animal Science	The effects of EDC on energy balance*
Michelle Hernandez	F'11-F'12, Sp'14-Sp'15	Animal Science	Effects of HFD on females mice*
Anna Hsieh	Su'12-F'14	Animal Science	Regulation of Ghnr in NPY neurons by diet*
Renee Levesque	F'12, Sp'13	Animal Science	NA
Janelle Rivera	Sum'13-Sum'15	Animal Science	Merck Alliance Ciencia Hispanic Scholars
Jennifer Skorupa	Sp'13	Bio. Sciences	NA
Marisa Snyder	F'13-Sp'14	Animal Science	The LH surge & gene expression in the arcuate*
Siana Usmani	Sp'13, F'13	Bio. Sciences	NA
Anthony Fruges	F'13-Sp'14	Animal Science	NA
Ruleena Barreto	F'13-Sp'15	Animal Science	NA
Victoria Wright	F'13-F'16	Animal Science	NA
Wendy Flores	F'14-Sp'15	Bio. Sciences	Arcuate gene expression by devel. exposures to EDC**
Alejandra Villalobos	Sp'14-Sp'15	Animal Sciences	Maternal overnutrition and gene expression*
Steven Rabel	Sum'14-Sp'16	Animal Science	NA
Nicholas Margolis	Sum'14-F'15	Animal Science	Obesity and diets high in n-6 PUFA
Taylor Tillery	F'14-Sp'17	Animal Science	Arcuate gene expression by devel. exposures to EDC**
Sarah O'Leary	Sp'15	Animal Science	NA
Vipa Patel	Sum'14-Sp'17	Animal Science	Effects of OPFR on energy and glucose homeostasis*
Frenzel Leyva	F'14-Sp'15	Animal Science	
Gina Giunta	F'14-Sp'15	Animal Science	
Christina Kaye	Sum'14-Sp'15	Animal Science	
Daniel Regan	Sum'15-Sp'17	Mol. Bio. & Biochem.	
Lubna Begum	Sum'15-F'15	Bio. Sciences	
Cortney Esposito	F'15	Animal Science	
Jessica Medina	F'15-Sp'17	Animal Science	
CarolAnn Diadone	F'16-Sp'17	Animal Science	
Justine Kwiecinski	F'16-Su'17	Animal Science	
Audrey Ghanian	F'16-Sp'17	Animal Science	
Naomi Shvedov	Sp'17-Sp'18	Cell Bio Neurosci	FFA in maternal diets and offspring energy balance
Lisa Botros	Sp'17-Sp'18	Animal Science	Role of ER α on hemodynamics and DIO*
Niveline Charles	Su'17	Bio. Sciences	
Allison Vanschaik	F'17-Sp'18	Animal Science	The physiological and neuroendocrine role of GHSR in KNDy neurons in females*
Samantha Kern	F'17-Sp'18	Animal Science	The role of ER α on Hormone-Induced feeding behaviors in male and female mice*
Nicole Girgis	F'17-Sp'18	Animal Science	The interaction of estrogen and ghrelin and its effect on locomotor and anxiety-like behavior in female mice*
Ananya Tirupathur	F'17-Sp'18	Animal Science	
Catherine Fourrier	F'17-Sp'18	Animal Science	
Chloe Baker	F'17-Sp'18	Animal Science	Maternal OPFR exposure and glucose homeostasis*
Danielle Kulyk	F'17-Sp'18	Animal Science	The role of GHSR in KNDy Neurons and the response to diet-induced obesity*
Angela Maeng	F'17-Sp'18	Biotechnology	The regulation of melanocortin neuropeptide

Samantha Adams	Su'18-Sp'19	Animal Sciences	expression in the arcuate nucleus by OPFR exposure in adult mice* Effects of maternal OPFR exposure on neonatal gene expression
Patricia Ramirez	Su'18-Sp'19	Biol. Sciences	
Kayla Munir	Su'18-Sp'19	Genetics	
Sierra Daisy	Sp'19-	Animal Science	
Samuel Fisher	Su'19-	Exercise Science	
Igor Lupinski	Fa'19-Sp'20	Biochem & Microbiol	
Somya Kodali	Sp'20	Biological Sciences	
Jordyn Cappa	Sp'20	Genetics	
Abriana Paris	Sp'20	Animal Sciences	

*G.H. Cook Scholar **Aresty Scholar

Undergraduate student: reviewer of G.H. Cook Scholar research thesis or Honor thesis

Student	Semesters	Major (Advisor)	Project Topic
Dennis Kim	F'19-Sp'20	Cell Bio Neurosci (Aston-Jones)	Sex-specific effects of gestational day 6-20 exposure to chlorpyrifos on adult behavior
Naomi Shvedov	F'18-Sp'19	Cell Bio Neurosci (Margolis)	Exploring the role of D1- and D2-spiny projection neurons of the striatum during sensory guided behavior using in-vivo calcium imaging
Ananya Tirupathur	F' 18-Sp'19	Animal Sciences (Sarkar)	Effect of MOR receptor gene knockdown on cell signaling in MDA-MB-231 Breast Cancer Cells
Belle Lin	Sp' 18	Mol Biol & Biochem (Aston-Jones)	Role of oxytocin in mitigating sex differences driving cocaine-seeking behaviors and cocaine
Kiera Brennan	F' 16-Sp' 17	Animal Sciences (Uzumcu/Zama)	Effects of developmental exposures to estrogenic EDC on rat ovaries
Haley Cohen	F' 15-Sp' 16	Animal Sciences (Bello)	Raspberry ketone [4-(4 Hydroxyphenyl)-2-butanone] effects on body weight homeostasis
Samantha Globerman	F' 14-Sp' 15	Animal Sciences (Cohick)	Role of estrogen and progesterone in enhanced susceptibility to mammary tumorigenesis
Rebecca Joyce	F' 14-Sp' 15	Animal Sciences (Uzumcu/Zama)	Effects of developmental estrogenic EDC exposures on rat uteri
Calvin Leung	F' 12-Sp' 13	Animal Sciences (Uzumcu/Zama)	Transgenerational effects of the endocrine-disrupting compound methoxychlor on rat ovarian function
Monica Smetts	F' 12-Sp' 13	Animal Sciences (Sarkar)	The effects of a mu opioid antagonist and delta opioid agonist on pituitary tumor growth in alcohol and non-alcohol exposed animals

SERVICE:

Professional Community

1. Society of Toxicology, Out in Toxicology and Allies – Senior Councilor, 2020-Present
2. *Ad hoc* reviewer for NIH SYN Study Section, February 15, 2019 and February 14, 2020
3. Reviewer for NIH Special Emphasis Panel, ZDK1 GRB-N (O2), May 24, 2018 & May 30, 2019
4. Agence Nationale de la Recherche Reviewer, June 2018
5. New Zealand Marsden Fund Reviewer, August 2016
6. *Ad hoc*/ECR reviewer for NIH IPOD Study Section, February 25, 2016
7. New Jersey Chapter of Society for Neuroscience: Secretary: 2016-Present
8. Reviewer for the following journals: *Applied Physiology, Nutrition, and Metabolism; Aquatic Toxicology; Archives of Environmental Contamination and Toxicology; Biology of Sex Differences; Brain Structure and Function; Endocrinology; Environmental Research; Environmental Toxicology; Food and Chemical Toxicology; Frontiers in Neuroendocrinology; Frontiers in Nutrition; General Physiology and Biophysics; International Journal of Toxicology; Journal of Comparative Neurology;*

Journal of Endocrinology; Journal of Molecular Endocrinology; Journal of Neuroendocrinology; Journal of Neurophysiology; Journal of Neuroscience; Journal of Translational Neuroscience; Molecular and Cellular Endocrinology; Molecular Nutrition and Food Research; Nature Communications, Neuroendocrinology; Neuropharmacology; Neuroscience; Nutrients, Proceedings of the Royal Society of London B; Psychoneuroendocrinology; Public Library of Science One; Scientific Reports; Steroids; Toxicology; Toxicology and Applied Pharmacology

Rutgers University

1. Rutgers University, Student Conduct Hearings and Appeal Board, 2020-Present
2. School of Environmental and Biological Sciences: Diversity, Communications, and Philanthropy Committee, 2019-Present
3. School of Environmental and Biological Sciences: Strategic Planning Committee, Research Section, 2019-2020
4. School of Graduate Studies: Dean's Fellowship, reviewer, 2018-2020
5. Endocrinology & Animal Biosciences Graduate Program: Executive Committee, 2017-2020
6. Endocrinology & Animal Biosciences Graduate Program: Academic Standards Committee, 2013-Present; Chair: 2017-2020
7. Nutritional Sciences Graduate Program: Admissions Committee, 2017-2020
8. Joint Graduate Program in Toxicology: Curriculum Committee, 2015-Present
9. Rutgers University RBHS Strategic Planning Committee: Obesity, Diabetes, and Endocrinology Workgroup, 2014
10. School of Environmental and Biological Sciences: George H. Cook Honors Committee, 2012-2017

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- American Physiological Society
- The Endocrine Society
- Society for Behavioral Neuroendocrinology
- Society for Neuroscience
- Society of Toxicology
- The Pavlovian Society
- The Organization for the Study of Sex Differences