CURRICULUM VITAE

Ki Ann Goosens
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APPOINTMENTS/EMPLOYMENT

06/06-06/16	Assistant Professor	Dept. of Brain and Cognitive Sciences	Massachusetts Institute of Technology
06/06-06/16	Investigator	McGovern Institute for Brain Research	Massachusetts Institute of Technology
06/16-1/18	Research Affiliate	McGovern Institute for Brain Research	Massachusetts Institute of Technology
12/17-8/18	Assistant Professor	Dept. of Neurology	Massachusetts General Hospital
01/18-6/18	Adjunct Professor	Dept. of Psychology	Boston College
8/18-present	Associate Professor	Dept. of Psychiatry	Icahn School of Medicine at Mount Sinai

GAPS IN EMPLOYMENT

Not applicable.

EDUCATION

1995	B.A. (with Distinction)	Cognitive Science (Concentration: Neuroscience)	University of Virginia
1999	M.A.	Biopsychology (Stephen Maren, advisor)	University of Michigan
2002	Ph.D.	Biopsychology (Stephen Maren, Advisor)	University of Michigan
	Certificate of Specialization	Cognitive Science and Cognitive Neuroscience	University of Michigan
1/03-6/06	Postdoctoral Training	Biology (Robert Sapolsky, Advisor)	Stanford University

CERTIFICATION

Not applicable.

LICENSURE

Not applicable.

HONORS/AWARDS

1997	Ford Foundation Predoctoral Fellowship	Ford Foundation

1997	National Science Foundation Predoctoral Fellowship	National Science Foundation
1997-2002	Howard Hughes Predoctoral Fellowship in the Biological Sciences	Howard Hughes Medical Institute
1997-2002	Rackham Merit Fellow	University of Michigan
2000, 2002	Rackham Dissertation Grant	University of Michigan
2002	Barbara Oleshansky Prize	University of Michigan
2002	Summer Institute Fellowship	Dartmouth Summer Institute in Cognitive Neuroscience
2002	Student Delegate at the International Achievement Summit	American Academy of Achievement
2002	Outstanding Graduate Student Instructor Award	University of Michigan
2003	Wyvell Award for Most Outstanding Dissertation in Biopsychology	University of Michigan
2003	Marquis Award for Most Outstanding Dissertation in Psychology	University of Michigan
2003	Rackham Distinguished Dissertation Award for Most Outstanding Dissertation	University of Michigan
2003,2004, 2005	Health Emotions Research Institute Travel Awardee	University of Wisconsin, Madison
2003	Finalist for the Life Sciences Research Foundation Postdoctoral Fellowship	Life Sciences Research Foundation
2003	American Psychological Association Postdoctoral Fellowship	American Psychological Association
2003-2006	National Science Foundation Postdoctoral Fellowship	National Science Foundation
2005	Participant, Laboratory Management Course	Howard Hughes Medical Institute
2009	Award for Excellence in Undergraduate Advising	Dept. of Brain and Cognitive Sciences
2011	Award for Innovation in Undergraduate Education	Massachusetts Institute of Technology
2017	Betty M. Seigel Young Investigator Award in Neurodegenerative Disease	Massachusetts General Hospital
2018	Kavli Fellow	National Academy of Sciences

PATENTS

Use of antagonists of ghrelin or ghrelin receptor to prevent or treat stress-sensitive psychiatric illness	US Patent Application 14/377229, Filed February 7, 2013
Use of antagonists of growth hormone or growth hormone receptor to prevent or treat stress-sensitive psychiatric illness	US Patent Application US 14/211,441, Filed March 14, 2014
Use of growth hormone or growth hormone receptor agonists to prevent or treat stress-sensitive psychiatric illness	US Patent Application US 14/212,365, Filed March 24, 2014
Ghrelin receptor antagonism during pregnancy to prevent stress-associated mental illness in offspring.	Patent Application PCT/US2015/056380, Filed October 20, 2015
Use of ghrelin or functional ghrelin receptor agonists to prevent and treat stress-sensitive psychiatric illness	US Patent Application US 15/052,110, Filed February 24, 2016
Serotonin 2c receptor antagonists to prevent and treat stress-related trauma disorders	US Patent Application US 15/185,628, Filed June 17, 2016

OTHER PROFESSIONAL ROLES

Professional Societies

1995-present	Society for Neuroscience	Member
2008-present	Society for Advancement of Chicanos and Native Americans in Science (SACNAS)	Member
	2008	Poster Judge
2010-present	Molecular and Cellular Cognition Society	Member
2010-present	Pavlovian Society	Member
2010-present	Women In Learning	Member
2014-present	Endocrine Society	Member
	2014, 2016	Abstract review and selection committee

Grant Review Activities

2009	American Recovery and Reinvestment Act (ARRA) Academic Research Enhancement Award (AREA) Program Review Panel	National Institutes of Health Ad Hoc Member
2010, 2011	Neural Systems Cluster	National Science Foundation Ad Hoc Member
2011	Special Emphasis Panel: Cutting-Edge Basic Research Awards	National Institute on Drug Abuse Ad Hoc Member
2012, 2014	Biobehavioral Mechanisms of Emotion, Stress and Health (MESH) Study Section	National Institutes of Health Ad Hoc Member

2012, 2014	M.I.T. International Science and Technology Initiatives (MISTI) Review	Massachusetts Institute of Technology Ad Hoc Member
2013	Panel	National Institutes of Health Ad Hoc Member
2015	Neuroendocrinology, Neuroimmunology, Rhythms and Sleep (NNRS) Study Section	National Science Center of Poland Ad Hoc Member
2015, 2016	PRELUDIUM Grant Review Panel	Netherlands Organisation for Scientific Research Ad Hoc Member
2017	Earth and Life Sciences Division Review Committee	National Institute on Alcohol Abuse and Alcoholism Ad Hoc Member
	Special Emphasis Panel: Alcohol and PTSD Co-Morbidity	

Committee Service

Local

2001-2002	Departmental Associate	Dept. of Psychology University of Michigan
2007-2010	Newsletter Committee	Dept. of Brain and Cognitive Sciences Massachusetts Institute of Technology
2008-2010	School of Science Underrepresented Minority Strategic Planning Group	Massachusetts Institute of Technology
2008-2010	Underrepresented Minority Graduate Student Forum	Massachusetts Institute of Technology
2008-2010	Faculty Search Oversight Committee	Dept. of Brain and Cognitive Sciences Massachusetts Institute of Technology
2008-2015	Faculty Search Committee	McGovern Institute for Brain Research Massachusetts Institute of Technology
2008-2015	Graduate Admissions Committee	Dept. of Brain and Cognitive Sciences Massachusetts Institute of Technology
2010-2015	Two-Photon Steering Committee	McGovern Institute for Brain Research Massachusetts Institute of Technology
2011-2016	Biosafety Committee	Dept. of Brain and Cognitive Sciences Massachusetts Institute of Technology
2011-2016	Undergraduate Education Committee	Dept. of Brain and Cognitive Sciences Massachusetts Institute of Technology
2011-2017	M.I.T. Committee on Assessment of Biohazards and Embryonic Stem Cell Research Oversight (CAB/ESCRO)	Massachusetts Institute of Technology
2007-2016	Thesis Committee Member (M.I.T. graduate students: Caitlin Vander Weele, Elizabeth Liu, Ana Fiallos, David Osher, Jake Bernstein, Nune Lemaire, Gregory Hale, Mark Howe, Bryan Allen, Azriel Ghadooshahy)	Massachusetts Institute of Technology

National

2007-2012	Gilliam Fellowship for Advanced Studies Review Panel 2009	Howard Hughes Medical Institute Ad Hoc Member Panel Chair

International

2017	Thesis Examiner (Belinda Po Lay Lyn)	University of New South Wales, New Zealand

Ad hoc Reviewer for:

Behavior and Brain Functions; Behavioural Brain Research; Behavioral Neuroscience; Biological Psychiatry; BMC Neuroscience; Cellular and Molecular Neurobiology; Cerebral Cortex; eLife; eNeuro; Frontiers in Neuroscience; International Journal of Neuropsychopharmacology; International Journal of Stress; Journal of Neuroscience; Learning and Memory; Molecular Psychiatry; Neuron; Nature Communications; Neurobiology of Learning and Memory; Neuropeptides; Neuropharmacology; Neuropsychopharmacology; Neuroscience; Neuroscience Letters; Physiology and Behavior; PLOS ONE; Proceedings of the National Academy of Sciences; Progress in Neurobiology; Psychoneuroendocrinology; Scientific Reports; Stress: the International Journal on the Biology of Stress; Sultan Qaboos University Medical Journal

RESEARCH PROFILE

My key accomplishments in research include: 1) The identification of multiple circuit and molecular pathways by which chronic stress dysregulates processing of emotional memory; and 2) The discovery of a ghrelin-growth hormone endocrine axis as an important mediator of the effects of chronic stress on multiple disease vulnerabilities with high co-morbidity, including post-traumatic stress disorder (PTSD), major depressive disorder (MDD), and obesity. These findings are transformative for the field of stress biology because they established a novel branch of the stress response which can operate in parallel to the HPA axis. They are also the first to demonstrate a causative role of ghrelin and growth hormone in psychiatric disease vulnerability. I have also examined local circuit activity in the amygdala during aversive memory encoding and retrieval, and discovered that individual neurons rarely exhibit the convergence of sensory information required to induce plasticity during learning; rather, this is selectively observed in clusters of neurons that encode the memory and not in adjacent neighboring clusters that are not involved in memory formation. This is important because these findings contradict multiple contemporary theories of associative memory formation, and suggest instead that small spatial clusters of neurons are the computational "unit" for associative fear memories. At Sinai, I will examine the mechanisms by which stress dysregulates ghrelin and growth hormone and examine the role of ghrelin in additional disease models. I will also examine how the topography of memory is altered when memory is dysregulated.

CLINICAL PROFILE

Not applicable.

IMPACT

My contributions to **Research** have been published in top tier journals in Psychiatry (*Molecular Psychiatry* and *Biological Psychiatry*), Psychology (*Psychological Science*), and

Neuroscience (*eLife*). It has also been featured in multiple international media outlets, including National Public Radio, Fox News, The Huffington Post, and Discovery Channel News. I have developed multiple international collaborations to pursue the translation of these studies to human clinical settings. Because human brain tissue is difficult to obtain from brain banks in the United States, I formed a collaboration with an Investigator in Portugal, where organ and tissue donation is compulsory unless an individual specifically opts out; we have collected tissue from several brain regions in suicide completers with MDD and controls without MDD to examine ghrelin and growth hormone in this stress-sensitive disease. I also formed a collaboration with investigators in Pakistan to examine ghrelin in human subjects traumatized by terrorism. I filed seven patents with the M.I.T. Technology Licensing Office related to targeting ghrelin pathways in stress-associated disease. Because many modulators of ghrelin signaling have been developed and undergone clinical testing in humans in the context of obesity research in large pharma, I aspire to repurpose such compounds to treat stress-sensitive disease.

My contributions to **Teaching** include the teaching of undergraduate courses and a graduate seminar. To facilitate innovation in my teaching while at M.I.T., I applied for and received an Award from the Alumni Class Fund. I was one of only two professors in my department to use Top Hat, an online platform for engaging students in class-based activities outside the classroom. I have also provided research opportunities for 27 M.I.T. undergraduates, 13 Northeastern co-op students, two Amgen Scholars, 7 M.I.T. Summer Research Program (MSRP) students, and 4 undergraduates from other local colleges; three of these programs focus on increasing representation of underrepresented minorities in STEM fields. These students met with me directly and were required to attend and present in our weekly lab meetings. Although my department at M.I.T. did not have an honors program for undergraduates, I had three undergraduates from other programs complete their honors thesis research in my laboratory. One of these students, Lauren Stone from Harvard University, was awarded the Hoopes Prize for her thesis, the highest award that Harvard bestows for undergraduate thesis work. Two of these undergraduate students have first-author papers from my laboratory. She was also invited to give a talk at the Endocrine Society meeting. I have also had numerous undergraduates present their work in poster and oral presentations at national scientific conferences (such as the Society for Neuroscience annual meeting). One of my URM students was an invited plenary speaker at the Stanford Undergraduate Research Conference in 2015; another was the first and only undergraduate speaker at the annual McGovern Retreat. It is very important to me to provide opportunities for undergraduates to conduct independent work, present that work at conferences, and write first-author papers. I served as an Advisor to M.I.T. Freshman for 5 years, and an advisor to students who major in Brain and Cognitive Sciences for 10 years. Additionally, I served as a Mentor in the Graduate Women at M.I.T. (GWAMIT) program for 2 years and in the Future Leaders Advancing Research in Endocrinology (FLARE) program of the Endocrine Society. I served as an invited speaker for numerous career panels through the M.I.T. Graduate Council, the M.I.T. Careers Office, the M.I.T. Path to Professorship Workshop, and at several conferences. My efforts in mentoring were acknowledged by a BCS Award for Excellence in Undergraduate Advising.

My contributions to the **Community** include public lectures at the Cambridge Science Museum, Great Lakes Science Center, and the M.I.T. Museum of Science. I also organized an event for the Cambridge Science Festival. I also served as a non-attorney legal representative for a severely mentally ill person in federal Social Security Court to argue for the awarding of retroactive disability benefits. Although I won the case, my experiences highlighted systemic flaws in both state and federal support of the mentally ill. I worked with the Legal Services of Northern Virginia, a non-profit group, to improve access to entitlement programs for the mentally ill.

GRANTS, CONTRACTS, FOUNDATION SUPPORT

PAST GRANTS

NIMH; Gene mediation of the opposing effects of chronic stress on hippocampus and amygdala F32 NS043040	Co-Investigator	2004	$20,000	N/A
National Alliance for Research on Schizophrenia and Depression; Amygdala regulation of hippocampal function: Studies of hippocampus-dependent memory and hippocampal neurogenesis	Principal Investigator	2004-2007	$100,000	N/A
McGovern Institute Neurotechnology Program; Targeted deletion of neuronal ensembles through activity-dependent suicide gene therapy	Principal Investigator	2008-2009	$50,000	N/A
NIH; An in Vivo/in vitro two-photon uncaging/imaging microscope	Co-Investigator	2009	$1,250,000	N/A
NIMH; Opposing effects of chronic stress in amygdala and hippocampus R01 MH084966	Principal Investigator	2009-2014	$1,250,000	N/A
DARPA/ARO; New treatments for stress-induced dysregulation of circuits regulating reward, fear, and habit learning 58076-LS-DRP	Principal Investigator	2010-2017	$7,106,158	N/A
DARPA/ARO; Genetic, epigenetic, and proteomic changes underlying vulnerability to suicide 58076-LS-DRP	Principal Investigator	2011-2017	$1,411,798	N/A

CURRENT GRANTS

NA				

PENDING GRANTS

NIMH; Mapping pain pathways in motivated behavior R34	Principal Investigator	2019-2022	$450,000	N/A

CLINICAL TRIALS PARTICIPATION

Project	Role in Project	Dates	Award	Other Info
N/A				

TRAINEES

Ugwechi Amadi	Undergraduate	2007-2010	M.I.T.	Project Leader at Boston Consulting Group
Elizabeth Liu	Technician and Master's student	2007-2010; 2014-2015	M.I.T.	
Anjum Asharia	Undergraduate	2008	M.I.T.	Program Director, Rev-
Amreeta Gill	Undergraduate	2008	M.I.T.	MBA Candidate, Wharton School
Katie Joseph	Undergraduate	2008	M.I.T.	Pediatric Genetic Counselor, Orlando Health
Nikisha Sookwah	Undergraduate	2008	M.I.T.	Professor, Sital College
Anita Lin	Undergraduate	2008-2009	M.I.T.	EdTech Program Manager, Applied Materials
Vincent C.K. Cheung	Postdoctoral Fellow	2008-2015	M.I.T.	Asst. Professor, The Chinese University of Hong Kong
Retsina Meyer	Graduate Student	2008-2013	M.I.T.	Co-founder Resilience Therapeutics
Ryan Dosumu-Johnson	MD/PhD Student	2009	M.I.T.	Resident, New York Presbyterian Hospital—Columbia Univ. Medical Center
Franckie Ramirez	Undergraduate	2009	M.I.T.	PhD Student, Harvard Univ.
Sarah Gomez	Undergraduate	2009-2010	M.I.T.	Medical School
Lindsay Johnson	Undergraduate	2009-2010	M.I.T.	Medical School
Thomas Moulia	Undergraduate	2009-2010	M.I.T.	Engineer, Pocketknife
Michael Baratta	Postdoctoral Fellow	2009-2011	M.I.T.	Research Associate, Univ. of Colorado at Boulder
Chris Saenz	Graduate Student	2009-2012	M.I.T.	Account Manager, Noldus Technologies
Anthony Burgos-Robles	Postdoctoral Fellow	2009-2013	M.I.T.	Postdoctoral Fellow, M.I.T.

Susana dos Santos Correia	Postdoctoral Fellow	2009-2015	M.I.T.	Scientist II, Ironwood Pharmaceuticals
Delvon Blue	Undergraduate	2010	M.I.T.	Resident Physician, Brody School of Medicine, East Carolina University Medical School
Manuela Pinto Kaster	Postdoctoral Fellow	2010	M.I.T.	Professor, Universidade Federal de Santa Catarina
Maia Kipman	Undergraduate	2010	M.I.T.	PhD Student, Tufts Univ.
Jigna Kumar	Undergraduate	2010	M.I.T.	PhD Student, National Univ. of Singapore
Thang Nguyen	Undergraduate	2010	M.I.T.	Medical School
Alec Poitzsch	Undergraduate	2010	M.I.T.	Analog Design Engineer, Analog Devices
Anne Runkle	Undergraduate	2010	M.I.T.	Medical school
Olga Vasileva	Undergraduate	2010	M.I.T.	
Stephanie P. Chen	Undergraduate	2010-2011	M.I.T.	Fabrication Engineer, Texas Instruments
Allison Lee	Undergraduate	2010-2013	M.I.T.	Medical School
Fangheng Zhou	Undergraduate	2010-2013	M.I.T.	
June Geng	Undergraduate	2011	M.I.T.	
Lindsay Kenney	Undergraduate	2011	M.I.T.	Clinical Research Coordinator, Columbia Univ. Medical Center
Nathaniel Kim	Undergraduate	2011	M.I.T.	
Brogan King	Undergraduate	2011	M.I.T.	
Eileen Parodi	Undergraduate	2011	M.I.T.	Assoc. Consultant, Endeavour Partners
Tamara Pena	Undergraduate	2011	M.I.T.	Online Product Marketing Assoc., Brilliant Earth
S.H. Chen	Undergraduate	2012	M.I.T.	
Oana Diaconescu	Undergraduate	2012	M.I.T.	PhD Student, Univ. of Cambridge
Stanley Gill	Undergraduate	2012	M.I.T.	Scientist, Broad Institute of Harvard/ M.I.T.
Ozyar Mizrahi	Undergraduate	2012	M.I.T.	
Sharanya Srinivasan	Undergraduate	2012	M.I.T.	Scientist, Biogen
Shiyu Zheng	Undergraduate	2012	M.I.T.	
Jordan Cruz	Undergraduate	2012-2013	M.I.T.	
Connor Kirschbaum	Undergraduate	2012-2013	M.I.T.	Software Engineer at Square
Norah Nguyen	Undergraduate	2012, 2014	M.I.T.	
Marina Afonkina	Co-op Student	2013	M.I.T.	
Cassandra Buzby	Co-op Student	2013	M.I.T.	
Natalie Petrossian	Undergraduate	2013	M.I.T.	Research Associate, Broad Institute, M.I.T./Harvard Univ.
Elia S. Harmatz	Technician	2013-2015	M.I.T.	PhD Student, Univ. Calif. Davis
Barbara Gisabella	Postdoctoral Fellow	2013-2016	M.I.T.	Research Scientist, Harvard Medical School
Graham Lee	Postdoctoral Fellow	2013-2016	M.I.T.	Instructor, National Univ. of Ireland, Galway
Jessica Brophy	Co-op Student	2014	M.I.T.	
Virginia Doherty	Co-op Student	2014	M.I.T.	Business Planning and Analysis Assoc., Alnylam Pharmaceuticals
Teryn Mitchell	Co-op Student	2014	M.I.T.	Technician, Picower Institute
Nareh Sahakian	Co-op Student	2014	M.I.T.	Research Assoc., Broad Institute of Harvard/ M.I.T.
Leighanne Wang	Co-op Student	2014	M.I.T.	Talent Acquisition, Google
Eliza Kosoy	Technician	2014-2015	M.I.T.	PhD Student, Univ. Calif., Berkeley
Nuno Machado	Graduate Student	2014-2015	M.I.T.	Postdoctoral Fellow, Universidade Federal do Ceará
Anna McGrath	Technician	2014-2016	M.I.T.	PhD Student, Temple Univ.
Xiaoyu Peng	Postdoctoral Fellow	2014-2016	M.I.T.	Research Scientist, Univ. Colorado Anschutz
Seh Hong Lim	Graduate Student	2014-present	M.I.T./ MGH	
Brigitte Aftandilian	Undergraduate	2015	M.I.T.	Research Asst., Boston VA Research Institute
George David Murphy	Co-op Student	2015	M.I.T.	B.S. Student, Northeastern Univ.
Camila Demaestri	Co-op Student	2015-2016	M.I.T.	PhD Student, Brown Univ.
Kathryn Levitsky	Co-op Student	2015-2016	M.I.T.	B.S. Student, Northeastern Univ.
Jessica Saifee	Undergraduate	2015-2016	M.I.T.	Doctor Asst., Kuchnir Dermatology and Dermatologic Surgery

Lauren Stone	Undergraduate	2015-2016	M.I.T.	Yale School of Medicine
Leonardo Santana Novaes	Graduate Student	2015-2016	M.I.T.	Postdoctoral Fellow, Univ. of São Paulo
Shadia Farah	Undergraduate	2015-2016	M.I.T.	PhD Student
Samiksha Shah	Master's Student	2015-2017	M.I.T.	Assoc. Scientist, Biogen
Jocoll Burgess	Graduate Student	2018-present	MGH	
Alan Espinal Martinez	Master's Student	2018	MGH	
Alice Péron	MD Student	2018	MGH	Univ. of Toulouse, School of Medicine
Yamile Lugo-Rodriguez	Undergraduate	2018	MGH	Framingham State Univ.
Juleen Lewis	Undergraduate	2018	MGH	Univ. Texas, Arlington

TEACHING ACTIVITIES

Teaching Activity/Topic	Level	Role	Indicate Level and Number of Learners Taught, and Venue	Number of hours week/month/yr	Evaluation Summary	Years Taught
Introduction to Biopsychology	Univ. of Michigan undergraduate course	Lecturer	Undergraduates (200)	2hr/week/semester		2000, 2001
Responsible Conduct in Science Graduate Students	M.I.T. graduate course	Lecturer	Graduate students (30)	3 hr/year		2007-2015
Preparing for the Academic Interview	M.I.T. Professional Development Seminar	Lecturer	Postdoctoral trainees (60)	2 hr/year		2008
Introduction to Neuroscience	M.I.T. undergraduate course	Lecturer	Undergraduates (60)	3 hr/year		2008, 2009
"How to negotiate a job offer", Professional Development Seminar	M.I.T. Professional Development Seminar	Lecturer	Postdoctoral trainees (60)	1.5 hr/year		2009, 2010
Graduate Fellowship Application Seminar	M.I.T. graduate course	Lecturer	Graduate students (12)	10 hr/week/semester		2009-2016
Biochemistry and Pharmacology of Synaptic Transmission	M.I.T. undergraduate course	Lecturer	Undergraduates (30)	4 hr/week/semester		2009-2011
Cell and Circuit Neurophysiology	M.I.T. undergraduate course	Lecturer	Undergraduates (30)	4 hr/week/semester		2009-2016
Funding	M.I.T. Path to Professorship Workshop	Lecturer	Graduate students and Postdoctoral trainees (60)	2 hr/year		2011-2014
The Nuts and Bolts of the Academic Job Search	M.I.T. Professional Development Seminar	Lecturer	Postdoctoral trainees (60)	2hr/year		2015
Neural Circuits for Emotional Memory	Boston College undergraduate course	Lecturer	Undergraduates (25)	6 hr/week/semester		2018

ADMINISTRATIVE LEADERSHIP APPOINTMENTS

INTERNAL:

Research or Clinical:

2008 Co-Lead Organizer, Symposium: "Biological Basis of Psychiatric Disease". One day symposium of international speakers. Audience of ~150; live-streamed to additional participants.

2010 Society for Neuroscience Annual Meeting, San Diego, CA
Panel Chair for Nanosymposium, "Associative Learning and Fear Conditioning"

2011 Lead Organizer, Symposium: "Foods, Drugs and Neurotransmitters: Mapping Mechanisms in Brain Chemistry". One day symposium of national speakers. Audience of ~150.

Teaching:
2009, 2010 Course co-director, "Graduate Fellowship Application Seminar". Co-designed course to improve writing skills for graduate students and postdoctoral trainees.

2009-2011 Course director, "Biochemistry and Pharmacology of Synaptic Transmission". Designed a new course for the Department of Brain and Cognitive Sciences at M.I.T.

2009-2018 Course director, "Cell and Circuit Neurophysiology". Designed a new course for the Department of Brain and Cognitive Sciences at M.I.T. Developed and used flipped-classroom curriculum.

2011-2016 Course director, "Graduate Fellowship Application Seminar"

Advising:
2007-2016 Massachusetts Institute of Technology, Cambridge, MA/ Academic Advisor
Served as a Departmental Academic Advisor for ~3-6 M.I.T. undergraduates per year

2010-2012 Massachusetts Institute of Technology, Cambridge, MA/ Freshman Academic Advisor
Served as a Freshman Academic Advisor for ~5-6 M.I.T. Freshmen per year

2013 Massachusetts Institute of Technology, Cambridge, MA/ Freshman Academic Advisor
Served as a residence-based academic advisor for Freshmen in Maseeh Hall

2014-2015 Massachusetts Institute of Technology, Cambridge, MA/ Freshman Academic Advisor
Served as a residence-based academic advisor for Freshmen in Next House

2014-2016 Massachusetts Institute of Technology, Cambridge, MA/ Mentor
Mentor for Graduate Women at M.I.T. (GWAMIT) Mentoring Program

General Administration:
2015 Performed analysis to show that a significant proportion of graduate students were graduating without meeting the minimum standard of two publications and female graduate students published fewer papers and had lower authorship than male graduate students within the department. Analysis was presented to Department Head and Chair of the Graduate Education Committee to argue for changes to promote improvements to and gender equity in graduate training.

EXTERNAL:
2014-2016 Future Leaders Advancing Research in Endocrinology (FLARE) program, Endocrine Society/ Mentor. Volunteer mentor to trainees.

2016 Co-Lead Organizer, Panel: "Gut Feelings: New Links Between Ghrelin and Psychiatric Disorders", Winter Conference on Brain Research.

2016 Co-Lead Organizer, Panel: "Neuropeptides and Stress: Evolutionary Perspectives", Neurobiology of Stress Workshop

PUBLICATIONS

Peer Reviewed Original Contributions

1. Cortright DN, **Goosens KA**, Lesh JS, Seasholtz AF. Isolation and characterization of the rat corticotropin-releasing hormone (CRH)-binding protein gene: transcriptional regulation by cyclic adenosine monophosphate and CRH. Endocrinology. 1997;138(5):2098-108. Epub 1997/05/01. doi: 10.1210/endo.138.5.5128. PubMed PMID: 9112410.
I collected, analyzed, and interpreted data.
2. Burrows HL, Nakajima M, Lesh JS, **Goosens KA**, Samuelson LC, Inui A, et al. Excess corticotropin releasing hormone-binding protein in the hypothalamic-pituitary-adrenal axis in transgenic mice. J Clin Invest. 1998;101(7):1439-47. Epub 1998/04/29. doi: 10.1172/JCI1963. PubMed PMID: 9525987; PubMed Central PMCID: 508722.
I collected, analyzed, and interpreted data.
3. Mistretta CM, **Goosens KA**, Farinas I, Reichardt LF. Alterations in size, number, and morphology of gustatory papillae and taste buds in BDNF null mutant mice demonstrate neural dependence of developing taste organs. J Comp Neurol. 1999;409(1):13-24. Epub 1999/06/11. PubMed PMID: 10363708; PubMed Central PMCID: 2710125.
I collected, analyzed, and interpreted all of the data. I edited the manuscript.
4. **Goosens KA**, Holt W, Maren S. A role for amygdaloid PKA and PKC in the acquisition of long-term conditional fear memories in rats. Behav Brain Res. 2000;114(1-2):145-52. Epub 2000/09/21. PubMed PMID: 10996055.
5. **Goosens KA**, Maren S. Contextual and auditory fear conditioning are mediated by the lateral, basal, and central amygdaloid nuclei in rats. Learn Mem. 2001;8(3):148-55. Epub 2001/06/08. doi: 10.1101/lm.37601. PubMed PMID: 11390634; PubMed Central PMCID: 311374.
6. Maren S, Yap SA, **Goosens KA**. The amygdala is essential for the development of neuronal plasticity in the medial geniculate nucleus during auditory fear conditioning in rats. J Neurosci. 2001;21(6):RC135. Epub 2001/03/14. PubMed PMID: 11245704.
I designed several experiments in this paper, and collected and analyzed and interpreted the data for those experiments. I trained one of my co-authors to collect the data in the other experiments. I generated figures for and edited the manuscript.
7. **Goosens KA**, Maren S. Pretraining NMDA receptor blockade in the basolateral complex, but not the central nucleus, of the amygdala prevents savings of conditional fear. Behav Neurosci. 2003;117(4):738-50. Epub 2003/08/23. PubMed PMID: 12931959.
8. Hobin JA, **Goosens KA**, Maren S. Context-dependent neuronal activity in the lateral amygdala represents fear memories after extinction. J Neurosci. 2003;23(23):8410-6. Epub 2003/09/12. PubMed PMID: 12968003; PubMed Central PMCID: 2291151.
I trained one of my co-authors to collect the data in this paper. I analyzed and interpreted data and edited the manuscript.
9. **Goosens KA**, Hobin JA, Maren S. Auditory-evoked spike firing in the lateral amygdala and Pavlovian fear conditioning: mnemonic code or fear bias? Neuron. 2003;40(5):1013-22. Epub 2003/12/09. PubMed PMID: 14659099.
10. **Goosens KA**, Maren S. NMDA receptors are essential for the acquisition, but not expression, of conditional fear and associative spike firing in the lateral amygdala. Eur J Neurosci. 2004;20(2):537-48. Epub 2004/07/06. doi: 10.1111/j.1460-9568.2004.03513.x. PubMed PMID: 15233763.
11. Meerson A, Cacheaux L, **Goosens KA**, Sapolsky RM, Soreq H, Kaufer D. Changes in brain MicroRNAs contribute to cholinergic stress reactions. J Mol Neurosci. 2010;40(1-2):47-55. Epub 2009/08/28. doi: 10.1007/s12031-009-9252-1. PubMed PMID: 19711202; PubMed Central PMCID: 2807969.
I designed several experiments, performed several experiments, interpreted the data, and edited the manuscript.
12. Kirby ED, Friedman AR, Covarrubias D, Ying C, Sun WG, **Goosens KA**, et al. Basolateral amygdala regulation of adult hippocampal neurogenesis and fear-related activation of newborn

neurons. Mol Psychiatry. 2012;17(5):527-36. Epub 2011/06/15. doi: 10.1038/mp.2011.71. PubMed PMID: 21670733; PubMed Central PMCID: 4310700.
I designed several experiments, oversaw the collection of the data for several experiments, interpreted the data, and edited the manuscript.
13. Kirby ED, Jensen K, **Goosens KA**, Kaufer D. Stereotaxic surgery for excitotoxic lesion of specific brain areas in the adult rat. J Vis Exp. 2012(65):e4079. Epub 2012/08/01. doi: 10.3791/4079. PubMed PMID: 22847556; PubMed Central PMCID: 3476400.
I trained my co-author in this technique, and edited the mansucript.
14. Cheung VC, Deboer C, Hanson E, Tunesi M, D'Onofrio M, Arisi I, et al. Gene expression changes in the motor cortex mediating motor skill learning. PLoS One. 2013;8(4):e61496. Epub 2013/05/03. doi: 10.1371/journal.pone.0061496. PubMed PMID: 23637843; PubMed Central PMCID: 3634858.
15. Vander Weele CM, Saenz C, Yao J, Correia SS, **Goosens KA**. Restoration of hippocampal growth hormone reverses stress-induced hippocampal impairment. Front Behav Neurosci. 2013;7:66. Epub 2013/06/21. doi: 10.3389/fnbeh.2013.00066. PubMed PMID: 23785317; PubMed Central PMCID: 3682134.
16. Meyer RM, Burgos-Robles A, Liu E, Correia SS, **Goosens KA**. A ghrelin-growth hormone axis drives stress-induced vulnerability to enhanced fear. Mol Psychiatry. 2014;19(12):1284-94. Epub 2013/10/16. doi: 10.1038/mp.2013.135. PubMed PMID: 24126924; PubMed Central PMCID: 3988273.
17. Lee G, **Goosens KA**. Sampling blood from the lateral tail vein of the rat. J Vis Exp. 2015(99):e52766. Epub 2015/06/13. doi: 10.3791/52766. PubMed PMID: 26065632; PubMed Central PMCID: 4542852.
18. Baratta MV, Kodandaramaiah SB, Monahan PE, Yao J, Weber MD, Lin PA, et al. Stress Enables Reinforcement-Elicited Serotonergic Consolidation of Fear Memory. Biol Psychiatry. 2016;79(10):814-22. Epub 2015/08/08. doi: 10.1016/j.biopsych.2015.06.025. PubMed PMID: 26248536; PubMed Central PMCID: 4698247.
19. Varela C, Weiss S, Meyer R, Halassa M, Biedenkapp J, Wilson MA, et al. Tracking the Time-Dependent Role of the Hippocampus in Memory Recall Using DREADDs. PLoS One. 2016;11(5):e0154374. Epub 2016/05/06. doi: 10.1371/journal.pone.0154374. PubMed PMID: 27145133; PubMed Central PMCID: 4856306.
I designed some of the experiments, oversaw some of the data collection and analysis, interpreted data, and edited the manuscript.
20. Simões AP, Machado NJ, Gonçalves N, Kaster MP, Simões AT, Nunes A, et al. Adenosine A2A Receptors in the Amygdala Control Synaptic Plasticity and Contextual Fear Memory. Neuropsychopharmacology. 2016;41(12):2862-71. Epub 2016/06/17. doi: 10.1038/npp.2016.98. PubMed PMID: 27312408; PubMed Central PMCID: 5061896.
I oversaw some of the data collection and analysis, interpreted data, and edited the manuscript.
21. Correia SS, McGrath AG, Lee A, Graybiel AM, **Goosens KA**. Amygdala-ventral striatum circuit activation decreases long-term fear. Elife. 2016;5. Epub 2016/09/28. doi: 10.7554/eLife.12669. PubMed PMID: 27671733; PubMed Central PMCID: 5039029.
22. Gisabella B, Farah S, Peng X, Burgos-Robles A, Lim SH, **Goosens KA**. Growth hormone biases amygdala network activation after fear learning. Transl Psychiatry. 2016;6(11):e960. Epub 2016/11/30. doi: 10.1038/tp.2016.203. PubMed PMID: 27898076; PubMed Central PMCID: 5290350.
23. Amadi U, Lim SH, Liu E, Baratta MV, **Goosens KA**. Hippocampal Processing of Ambiguity Enhances Fear Memory. Psychol Sci. 2017;28(2):143-61. doi: 10.1177/0956797616674055. PubMed PMID: 28182526; PubMed Central PMCID: 5308550.
24. Harmatz ES, Stone L, Lim SH, Lee G, McGrath A, Gisabella B, et al. Central Ghrelin Resistance Permits the Overconsolidation of Fear Memory. Biol Psychiatry. 2017;81(12):1003-13. Epub 2016/12/25. doi: 10.1016/j.biopsych.2016.11.009. PubMed PMID: 28010876; PubMed Central PMCID: 5447505.
25. Friedman A, Homma D, Bloem B, Gibb LG, Amemori KI, Hu D, et al. Chronic Stress Alters Striosome-Circuit Dynamics, Leading to Aberrant Decision-Making. Cell.

2017;171(5):1191-205 e28. Epub 2017/11/18. doi: 10.1016/j.cell.2017.10.017. PubMed PMID: 29149606; PubMed Central PMCID: 5734095.
I designed some of the experiments, oversaw some of the data collection and analysis, interpreted data, and co-wrote the manuscript.
26. ul Akbar Yousufzai MI, Harmatz ES, Shah M, Malik M, **Goosens KA**. (2018) Ghrelin is a persistent biomarker for chronic stress exposure in adolescent rats and humans. Transl Psychiatry. 2018;8(1):74. Epub 2018/04/13. doi: 10.1038/s41398-018-0135-5. PubMed PMID: 29643360; PubMed Central PMCID: 5895712.
27. Novaes LS, Nilton, B dos Santos, Perfetto JG, **Goosens KA**, Munhoz CD. Environmental enrichment prevents acute restraint stress-induced anxiety-related behavior but not changes in basolateral amygdala spine density. Psychoneuroendocrinol. 2018 Dec;98:6-10. doi: 10.1016/j.psyneuen.2018.07.031
I co-designed some of the experiments, oversaw some of the data collection and analysis, interpreted data, and co-wrote the manuscript.
28. Lee YF, Lim SH, Shah S, Rudolph AE, **Goosens KA** Network cooperation and competition underlies fear memory in the amygdala. *Submitted*. 2019.
29. Harmatz, ES, Machado, N., Cunha RA, **Goosens KA**. A necessary critical period for ghrelin in stress-induced weight gain. *Submitted.* 2019.
30. Burgos-Robles A, **Goosens KA.** Prolonged stress triggers enduring dysregulation in amygdala-prelimbic fear circuits. *Submitted*. 2019.

Other Peer Reviewed Publications

1. **Goosens KA**, Maren S. Long-term potentiation as a substrate for memory: evidence from studies of amygdaloid plasticity and Pavlovian fear conditioning. Hippocampus. 2002;12(5):592-9. Epub 2002/11/21. doi: 10.1002/hipo.10099. PubMed PMID: 12440575.
2. **Goosens KA**. Hippocampal regulation of aversive memories. Curr Opin Neurobiol. 2011;21(3):460-6. Epub 2011/05/07. doi: 10.1016/j.conb.2011.04.003. PubMed PMID: 21546244; PubMed Central PMCID: 3139021.
3. Correia SS, **Goosens KA**. Input-specific contributions to valence processing in the amygdala. Learn Mem. 2016;23(10):534-43. Epub 2016/09/17. doi: 10.1101/lm.037887.114. PubMed PMID: 27634144; PubMed Central PMCID: 5026206.

Invited Contributions

Not applicable.

Books and Book Chapters

1. **Goosens KA**, Sapolsky RM. Stress and Glucocorticoid Contributions to Normal and Pathological Aging. In: Riddle DR, editor. Brain Aging: Models, Methods, and Mechanisms. Frontiers in Neuroscience. Boca Raton (FL) 2007.
2. Mitchell A, Jiang Y, Peter CJ, **Goosens KA**, Akbarian S. The brain and its epigenome. In: Charney D, Nestler E., Sklar P. and Buxbaum J, editors. The Neurobiology of Mental Illness: Fourth Edition. Oxford University Press. New York (NY) 2013.
3. Wickersham IR, Sullivan HA, Pao GM, Hamanaka H, **Goosens KA**, Verma. IM, Seung HS. Lentiviral vectors for retrograde delivery of recombinases and transactivators. In: Lansford R, editor. Molecular Neuroscience: A Laboratory Manual. CSHL Press.Cold Spring Harbor (NY) 2014.

Non-Peer Reviewed Publications

1. **Goosens KA.** Conditional plasticity in the amygdala: Substrates, molecular mechanisms, and the relationship to fear behavior. Dissertation Abstracts International, 63(10B), 4521.

INVITED LECTURES/PRESENTATIONS

National Conferences/Symposia/Academia

1999	Amygdaloid NMDA Receptors Establish Behavioral and Neuronal Memories of Conditional Fear Biopsychology Colloquium Series, University of Michigan
2001	Behavioral and Single-Unit Studies of Long-Term Fear Memory Biopsychology Colloquium Series, University of Michigan
2002	Searching for an Engram: What Studies of Pavlovian Fear Conditioning Tell Us About the Structure of Memory Department of Biology, Stanford University
2002	Conditional plasticity in the amygdala: Substrates, molecular mechanisms, and the relationship to fear behavior Biopsychology Colloquium Series, University of Michigan
2003	Conditional increases in amygdaloid unit activity are regulated by associative factors and not the expression of fear behaviors Howard Hughes Medical Institute, Bethesda, MD
2004	Long-latency conditional plasticity in the lateral amygdala is modulated by behavior 28th Annual Conference on the Neurobiology of Learning and Memory, Park City, UT
2005	Molecular mechanisms, plasticity, and behavior in the fear system McGovern Institute, Massachusetts Institute of Technology
2005	Gene contributions to the opposing effects of chronic stress on hippocampus and amygdala 29th Annual Conference on the Neurobiology of Learning and Memory, Park City, UT
2006	Systems and molecular approaches to the study of fear memory Fourth Annual McGovern Retreat, Newport, RI
2006	Opposing effects of chronic stress on hippocampus and amygdala 30th Annual Conference on the Neurobiology of Learning and Memory, Park City, UT
2007	Novel mechanisms of pathological fear Brain and Cognitive Sciences Departmental Retreat, Boston, MA
2007	Characterizing the effects of chronic stress on the brain Plastic Lunch, Picower Institute for Learning and Memory, Massachusetts Institute of Technology
2007	Stress potentiation of fear and anxiety McLean Hospital, Belmont, MA
2008	Identifying new approaches to reduce pathological fear Stanley Center, Broad Institute
2009	Unique effects of chronic stress in the amygdala The Amygdala in Health and Disease, Gordon Research Conference, Colby College, Waterville, ME
2009	Identifying new approaches to reduce pathological fear M.I.T. Summer Research Program, Cambridge, MA
2010	Redefining the stress response: a new biology for treating pathological fear and anxiety Colby College, Waterville, ME
2011	Ambiguous Timing of Aversive Events Enhances Fear Learning Through Hippocampal Prediction Errors Pavlovian Society, Milwaukee, WI
2012	Thinking outside the HPA “Box”: New targets for preventing stress-related enhancement of fear Pavlovian Society, Jersey City, NJ
2012	Thinking outside the HPA “Box”: New targets for preventing stress-related enhancement of fear MGH Psychiatric Genetics and Translational Research Seminar, Massachusetts General Hospital, Boston, MA
2012	Thinking outside the HPA “Box”: New targets for preventing stress-related enhancement of fear Depression and Research Clinical Program Seminar, Massachusetts General Hospital,

Boston, MA

2013 Thinking outside the HPA “box”: A ghrelin-growth hormone axis for stress-related dysfunction in affective circuits
Post-traumatic Stress Disorders Research Program, Massachusetts General Hospital, Boston, MA

2013 Stress and fear
Maseeh Hall, Office of Undergraduate Advising and Academic Programming, Cambridge, MA

2013 Not-so-great expectations: How stress and uncertainty drive fear
Pavlovian Society, Austin, TX

2013 Thinking outside the HPA “box”: A ghrelin-growth hormone axis for stress-related dysfunction in affective circuits
Hormonal Control of Circuits for Complex Behaviors, HHMI Janelia Farm Research Campus, Ashburn, VA

2013 Thinking outside the HPA “box”: a new stress axis for affective dysregulation
Molecular and Cellular Neuroscience Seminar, Massachusetts Institute of Technology

2014 Thinking outside the HPA “box”: a ghrelin-growth hormone axis for dysregulation of affective circuits
Neuroscience Program Seminar Series, University of South Carolina School of Medicine, Columbia, SC

2014 Thinking outside the HPA “box”: a ghrelin-growth hormone axis for dysregulation of affective circuits
Yerkes National Research Center, Emory University, Atlanta, GA

2014 Thinking outside the HPA “box”: a ghrelin-growth hormone axis for dysregulation of affective circuits
Neuroscience Lecture Series, University of Chicago, Chicago, IL

2014 You are what you don’t eat: how hunger hormones contribute to mental illness
reThink Food!, The Culinary Institute of America, Napa Valley, CA

2014 Stress and fear
Northeastern University American Chemical Society, Northeastern University, Boston, MA

2014 Enhancing resilience and resistance to stress
Chief of Staff of the Army's (CSA) Strategic Studies Group (SSG), Arlington, VA

2015 A new theory to predict and treat PTSD
PTSD Innovations Group, Massachusetts General Hospital, Boston, MA

2015 Thinking outside the HPA “box”: a ghrelin-growth hormone axis for dysregulation of affective circuits
Pfizer, Cambridge, MA

2015 Stress-enhancement of growth hormone in amygdala neurons dysregulates fear memory allocation
The Amygdala in Health and Disease, Gordon Research Conference, Stonehill College, Easton, MA

2015 Growth hormone and post-traumatic stress disorder: too much of a good thing?
The Growth Hormone/Prolactin Family in Biology and Disease", FASEB Scientific Research Conference, Steamboat Springs, CO

2016 Gut-brain communication in psychiatric disease
Behavioral Neuroscience Seminar Series, Boston College, Boston, MA

2016 Ghrelin: the “missing link” between stress, metabolism and fear disorders
Neurobiology of Stress Workshop. Newport Beach, CA

2016 A new biology for stress
Winter Conference on Brain Research, Breckenridge, CO

2017 Neurobiological systems for emotion and psychiatric disease
MassGeneral Institute for Neurological Disease (MIND) seminar series, Massachusetts General Hospital, Charlestown, MA

2017 Ghrelin: a new metabolic link between stress and fear

Mayo Clinic, Rochester, MN

2017 From mouse to man: translatable systems and neural circuits for emotional memory
Biopsychology, Department of Psychology, University of Michigan, Ann Arbor, MI

2017 From mouse to man: translatable systems and neural circuits for emotional memory
Department of Anatomy and Neurobiology, Boston University School of Medicine, Boston, MA

2017 Network competition and cooperation in long-term memory formation
Department of Neurology, Massachusetts General Hospital, Charlestown, MA

2017 From mouse to man: translatable systems and neural circuits for emotional memory
The Friedman Brain Institute, Icahn School of Medicine at Mt. Sinai, New York, NY

2017 From mouse to man: translatable systems and neural circuits for emotional memory
Dept. of Neurology, Icahn School of Medicine at Mt. Sinai, New York, NY

2018 From mouse to man: translatable systems and neural circuits for emotional memory
National Institute on Alcohol Abuse and Alcoholism, Bethesda, MD

2019 Ghrelin as a target in stress-associated disease
Regulatory Peptides: Emerging Neurotranslational Opportunities. National Institute on Mental Health, Bethesda, MD

International Conferences/Symposia

2009 The stressed brain: New treatments for pathological fear and anxiety
New Frontiers in Brain Research, Tsinghua University, Beijing, China

2013 Thinking outside the HPA "box": A ghrelin-growth hormone axis for stress-related dysfunction in affective circuits
Affective Brain Lab, University College London

2016 Ghrelin: a new metabolic link between stress and fear
European Molecular and Cellular Cognition Society Meeting, Copenhagen, Denmark

2018 Elevated ghrelin drives maladaptations following chronic stress
Ghrelin Symposium, International Congress of Neuroendocrinology, Toronto, Ontario, Canada

2018 Ghrelin as a stress hormone
22nd International Symposium on Regulatory Peptides, Acapulco, Mexico

2019 What makes memories strong? Network determinants of associative memory strength under ambiguity
13th Meeting of the German Neuroscience Society, Göttingen, Germany

2019 Invited talk. July, 2019
Society for Ingestive Behavior. Utrecht, Netherlands

Speaking Engagements (Lay Public)

2008 The stressed brain: Mechanisms of vulnerability and resistance
Museum of Science, Boston, MA

2008 The stressed brain: Searching for new mechanisms to reduce pathological fear
Parents Weekend, Dept. of Brain and Cognitive Sciences, M.I.T., Cambridge, MA

2008 The stressed brain: Searching for new mechanisms to reduce pathological fear
CONVERGE weekend, M.I.T., Cambridge, MA

2009 The neural basis of trauma
Mental Health Awareness Week, M.I.T., Cambridge, MA

2009 Gilliam Fellows Professional Development Seminar (Panelist)
Howard Hughes Medical Institute, Bethesda, MD

2009 EXROP Student Research Career Panel (Moderator)
Howard Hughes Medical Institute, Bethesda, MD

2009 The science of fear
Cambridge Science Fair, M.I.T., Cambridge, MA

2009 The stressed brain: Searching for new mechanisms to reduce pathological

M.I.T. Summer Research Program, Cambridge, MA

2009 The stressed brain: Searching for new mechanisms to reduce pathological fear
Amgen Scholars Program, M.I.T., Cambridge, MAE

2010 The neurobiology of stress: Why aversive experiences change the brain
HHMI Summer Workshop for High School Teachers, M.I.T., Cambridge, MA

2010 The stressed brain: providing new insights into treatments for pathological fear and anxiety
Friends School, Philadelphia, PA

2011 Friends for Depression Awareness Symposium (Panelist)
McGovern Institute for Brain Research, Cambridge, MA

2011 Making memories in a dangerous world: how scary experiences shape the brain
Great Lakes Science Center, Cleveland, OH

2011 Fear and the brain
MC^2 Science Technology Engineering & Mathematics High School, Cleveland, OH

2012 The neurobiology of sloth
"Science for Sinners", M.I.T. Museum of Science. Cambridge, MA

2014 Fear, Trauma and Memory: A Panel Discussion (Panelist)
McGovern Institute for Brain Research, Cambridge, MA

2014 Fear: a "gut" feeling
M.I.T. Museum of Science. Cambridge, MA

2014 "Futures in the Science" (Panelist)
Northeastern University, Boston, MA

2015 "Meet the Experts" (Panelist)
FASEB Scientific Research Conference, Steamboat Springs, CO

2015 Fear and hunger
"Fright Factors", M.I.T. Museum of Science. Cambridge, MA

VOLUNTARY PRESENTATIONS

Poster Abstracts (Last 3 years)

1. Gisabella B, Farah S, **Goosens KA**. (2015) Growth hormone regulates dendritic spine density and memory allocation in amygdala neurons. McGovern Retreat, North Falmouth, MA.
2. Gisabella B, Farah S, **Goosens KA**. (2015) Growth hormone regulates dendritic spine density and memory allocation in amygdala neurons. Molecular and Cellular Cognition Society (MCCS) 14th Annual Meeting, Chicago, IL.
3. Lee G, **Goosens KA**. (2015) Maternal ghrelin elicits transgenerational changes in emotional processing and stress responsiveness. British Neuroscience Association, Festival of Neuroscience, Edinburgh, UK.
4. Dauvermann MR, Moorhead TWJ, Lee G, **Goosens KA**. (2015) Translational Neuroscience and Translational Psychiatry – Development of a new circuit-based framework. British Neuroscience Association, Festival of Neuroscience, Edinburgh, UK.
5. Lee G, Dauvermann, MR, **Goosens KA**. (2015) Investigating cognitive dysfunction to improve outcome in a mouse model of post-traumatic stress disorder. British Neuroscience Association, Festival of Neuroscience, Edinburgh, UK.
6. Correia SS, McGrath AG, Lee A, Graybiel AM, **Goosens KA**. (2015) A circuit connecting the amygdala and ventral striatum regulates fear extinction. Amygdala in Health and Disease, Gordon Research Conference. Easton, MA.
7. Gisabella B, Farah S, Yao J, **Goosens KA**. (2015) Stress-enhancement of growth hormone in amygdala neurons dysregulates fear memory allocation. The Amygdala in Health and Disease, Gordon Research Conference, Stonehill College, Easton, MA. (Selected Oral Abstract by K.A. Goosens)
8. Gisabella B, Farah S, Yao J, **Goosens KA**. (2015) Growth hormone and post-traumatic stress disorder: too much of a good thing? "The Growth Hormone/Prolactin Family in Biology and

Disease", FASEB Scientific Research Conference, Steamboat Springs, CO, 2015 (Selected Oral Abstract presented by K.A. Goosens)

9. Gisabella B, Wang L, Yao J, **Goosens KA**. (2015) Growth hormone differentially regulates dendritic spine density in amygdalar and hippocampal neurons. Wiring the Brain, Cold Spring Harbor, NY.
10. McGrath A, Correia S, **Goosens KA**. (2015) Fear extinction modulates AMPA receptor expression in the nucleus accumbens. 2015 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. Online.
11. Correia SS, Graybiel AM, **Goosens KA**. (2015) A circuit connecting the amygdala and ventral striatum regulates fear extinction. 2015 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. Online.
12. Holly EN, Peng X, **Goosens KA**. (2016) Repeated stress increases ghrelin receptor expression in ventral tegmental area dopamine neurons. Neurobiology of Stress Workshop, Newport Beach, CA. (Selected for Travel Award to E.N. Holly)
13. Novaes LS, Munhoz, CD, **Goosens KA**. (2016) Cross-talk between glucocorticoids and ghrelin in the emergent and persistent effects of stress. Neurobiology of Stress Workshop, Newport Beach, CA.
14. Lim SH, **Goosens KA**. (2016) Hippocampal processing of prediction error enhances associative fear memory. Henry Russek Student Achievement Day, Boston University, Boston, MA. (Third Place awarded to S.H. Lim)
15. Ross R, ODay E, Rosencrans P, Nadal M, Ressler K, **Goosens KA**, May V, Simon N. (2017) Circulating PACAP is a biomarker for anxiety disorders in females. 2017 Annual Meeting of the Society of Biological Psychiatry, San Diego, CA.
16. Stone L, **Goosens KA**. (2017) Central ghrelin resistance: A newly discovered consequence of chronic stress, with implications for stress-associated mental illness. Endocrine Reviews, In press. (Selected Oral Abstract for presentation by L. Stone; Awarded First Place)
17. Lim SH, **Goosens KA**. (2017) Contingency degradation in associative fear conditioning is processed by hippocampus. Henry Russek Student Achievement Day, Boston University, Boston, MA
18. Lim SH, **Goosens KA**. (2017) Contingency degradation in associative fear conditioning is processed by hippocampus. Boston Psychology Graduate Student Symposium, Northeastern University, Boston, MA.
19. Lee YF, Lim SH, Shah S, **Goosens KA**. (2017) Amygdala network dynamics underlying long-term fear memory recall. Amygdala in Health and Disease, Gordon Research Conference. Easton, MA.
20. ul Akbar Yousufzai MI, Harmatz ES, Shah M, Malik M, **Goosens KA.** (2018) Ghrelin as a mediator of persistent maladaptive consequences of adolescent stress. Stress Neurobiology Workshop. Banff, Alberta, Canada.
21. Novaes LS, Nilton, B dos Santos, Perfetto JG, **Goosens KA**, Munhoz CD. (2018) Environmental enrichment prevents acute restraint stress-induced anxiety-related behavior but not changes in basolateral amygdala spine density. Stress Neurobiology Workshop. Banff, Alberta, Canada.
22. Lee YF, Lim SH, Shah S, Rudolph A, **Goosens KA**. (2019) Local amygdala network competition and cooperation in long-term memory. 13th Meeting of the German Neuroscience Society, Göttingen, Germany

MEDIA RESOURCE EDUCATIONAL MATERIALS

Audiovisual Productions

I was interviewed for the following media productions targeting the layperson audience.

2008	The Science of Stress	Podcast, Museum of Science, Boston, MA	http://www.mos.org/events_activities/podcasts&d=2572

2008	The Emotional Code	TV Series, National Science Council of Taiwan and National Taiwan University Psychology Department, Taiwan	
2010	Gene Therapy Could Change Minds	Web video, "Simply Science" series, Nature Education, Cambridge, MA	http://www.youtube.com/watch?v=-m2x1KAzrMk
2016	What happens to the brain when we get scared?	Web video, "Boddities" series, Boston Globe, Boston, MA	https://www.statnews.com/2016/10/28/scared-brain-body-reaction/

Press/Media Coverage

2013	Press Interview http://commonhealth.wbur.org/2013/10/hunger-hormone-stress-ptsd#comments	National Public Radio (WBUR, Boston, MA)
2013	Press Interview http://www.cknw.com/2013/10/17/the-simi-sara-show-october-17th/	The Simi Sara Show (Vancouver, BC, Canada)
2013	Press Interview http://news.discovery.com/human/health/could-a-vaccine-for-ptsd-protect-soldiers-131016.htm#mkcpgn=rssnws1	Discovery Channel News (online)
2013	Press Interview http://web.mit.edu/newsoffice/2013/ghrelin-ptsd-1015.html	M.I.T. News (Cambridge, MA)
2013	Press Interview http://www.wdrb.com/story/24199377/mit-says-possible-ptsd-vaccine-holds-promise	WDRB Louisville, KY
2013	Press Interview http://www.ddn-news.com/index.php?newsarticle=7997	DD News (online)
2013	Press Coverage http://www.foxnews.com/health/2013/12/11/mit-researchers-discover-possible-vaccine-for-post-traumatic-stress-disorder/	Fox News (Boston, MA)
	http://www.myfoxdc.com/story/24202293/mit-researchers-discover-possible-vaccine-for-post-traumatic-stress-disorder#axzz2x7ovcXn2	Fox News (Washington D.C.)
	http://www.myfoxatlanta.com/story/24202293/mit-researchers-discover-possible-vaccine-for-post-traumatic-stress-disorder#axzz2x7pW5cN6	Fox News (Atlanta, GA)
2013	Press Coverage http://www.huffingtonpost.com/2013/10/21/ghrelin-ptsd-appetite-hormone-fear-stress_n_4124515.html	The Huffington Post (online)
2013	Press Coverage http://www.technologyreview.com/article/522466/hunger-hormone-linked-to-ptsd/	M.I.T. Technology Review (Cambridge, MA)
2015	Press Interview https://mcgovern.mit.edu/news/news/possible-new-weapon-against-ptsd/	M.I.T. News (Cambridge, MA)
2015	Press Coverage http://www.psychiatryadvisor.com/adhd/post-traumatic-stress-disorder-memory-trauma-stress/article/435896/	Psychiatry Advisor (online)
2015	Press Coverage http://www.redorbit.com/news/health/1113408357/mit-ptsd-could-be-prevented-090115/	RedOrbit (online)
2015	Press Coverage	Global News Connect

	http://globalnewsconnect.com/possible-new-weapon-against-ptsd/ Press Coverage	(online)
2015	https://www.dddmag.com/news/2015/09/fighting-ptsd Press Interview	Drug Discovery and Development (online)
2015	https://www.bostonglobe.com/lifestyle/2015/09/11/stress-ill-effect-mental-illness/vNMeQJpCCKWB6NOaos2EGO/story.html Press Coverage	Boston Globe (Boston, MA)
2015	http://www.acesconnection.com/blog/stress-s-ill-effect-on-mental-illness-bostonglobe-com Press Interview	ACES Connection (online blog)
2015	http://health.usnews.com/health-news/patient-advice/articles/2015/11/10/could-ptsd-be-prevented-post-trauma	U.S. News and World Report
2016	Press Interview http://news.mit.edu/2016/brain-circuit-can-keep-fears-at-bay-0927	M.I.T. News (Cambridge, MA)
2016	https://www.biosciencetechnology.com/news/2016/09/pinpointing-brain-circuit-can-keep-fears-bay	Bioscience and Technology Online
2018	Press Coverage http://www.wbur.org/commonhealth/2018/04/12/ghrelin-stress-trauma-hormone	National Public Radio (WBUR, Boston, MA)
2018	Press Coverage https://www.massgeneral.org/News/pressrelease.aspx?id=2239	Massachusetts General Hospital