

Ioana Carcea, M.D., Ph.D.

Curriculum Vitae

Skirball Institute of Biomolecular Medicine
Molecular Neurobiology Program
New York University School of Medicine
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EDUCATION

Ph.D. in Neuroscience	2010
Mount Sinai School of Medicine, New York Specialization: Neurobiology	
Exchange Student Program	2002
Université Henri Poincaré, Nancy, France, Rotations in Neurology and Endocrinology	
M.D. in General Medicine	2003
Grigore T Popa University of Medicine and Pharmacy, Iasi, Romania	

RESEARCH EXPERIENCE

New York University School of Medicine, Skirball Institute, New York	
Associate Research Scientist	2016-2017
Postdoctoral Fellow, Research adviser: Dr. Robert C. Froemke	2011-2015
Control of auditory processing and auditory perception by behavioral states Neuromodulatory control of behavioral states and of perceptual learning Neuromodulatory control of social interactions	
Mount Sinai School of Medicine, Department of Neuroscience, New York	
Doctoral Research, Research adviser: Dr. Deanna L. Benson	2004-2010
Axon guidance in the mammalian neocortex Roles of an autism-linked molecule in the development of mouse somatosensory cortex Neuronal endocytic pathways	
Henri Poincaré University, Department of Neurology and Endocrinology, Nancy, France	
Erasmus-Socrates Undergraduate Exchange Program	2002
Clinical research: prognosis of Parkinson's patients after deep brain stimulation treatment	
Grigore T. Popa University of Medicine, Department of Pharmacology, Iasi, Romania	
Undergraduate Research, Research adviser: Dr. Ostin Mungiu	2001
Single aminoacid agonists of opioid receptors	

RESEARCH SUPPORT

Pathway to Independence Award (K99/R00); Carcea (PI) National Institute of Mental Health	02/2016-01/2021
Competitiveness Operational Program; Carcea (PI) Romanian National Agency for Scientific Research and Innovation	11/2016-11/2020
NARSAD Young Investigator Award; Carcea (PI) Brain and Behavior Research Foundation	01/2014-01/2016
Training Grant in Systems and Integrative Neuroscience, NYU-CNS; Kiorpes (PI) National Institute of Mental Health	09/2011-09/2013
Seaver Award: Carcea (PI) The Beatrice and Samuel A. Seaver Foundation	05/2010-12/2010
Erasmus-Socrates Scholarship European Region Action Scheme for the Mobility of University Students	02/2002-06/2002

AWARDS and HONORS

Best Poster Presentation Award, Skirball retreat, NYU-SoM, NY	2016
Outstanding Postdoc Award, NYU-SoM, NY	2016
Schwarz Foundation Award, CSHL, NY	2014
Katowitz/Radin Investigator, Brain and Behavioral Research Foundation, New York, NY	2014
Invited to peer review submissions for the Cosyne 2014 meeting, Salt Lake City, UT	2014
Invited to peer review submission for the Journal of Neuroscience	2012-2013
Graduate School Teaching Award, Mount Sinai School of Medicine	2006
Graduate School Travel Award, Mount Sinai School of Medicine	2005, 2006, 2009
Government Top Student Scholarship, University of Medicine and Pharmacy Iasi	1997, 2000-2003

SELECTED PRESENTATIONS

Selected for nanosymposium talk at the Society for Neuroscience, San Diego CA	2018
Invited to talk at Auditory SPLASH 2018 meeting, Philadelphia, PA	2018
Invited to talk in a minisymposium at the Japan Neuroscience Society, Kobe, Japan	2018
Selected for nanosymposium talk at the Society for Neuroscience, Washington DC	2017
Invited to give a talk at the IUPS meeting, Rio de Janeiro, Brazil	2017
Invited to give a talk at Japan Neuroscience Society, Makuhari, Japan	2017
Invited to give a seminar at RIKEN Brain Science Institute, Tokyo, Japan	2017
Invited to give a seminar for the MSN series at Mount Sinai School of Medicine, New York, NY	2016
Invited to give a talk at the Cosyne meeting, Salt Lake City, UT	2012
Selected for nanosymposium talk at the Society for Neuroscience, Washington DC	2008

PUBLICATIONS

*** = Authors contributed equally to the work

Research articles

Carcea I, Rumi Oyama, Maria Alvarado Torres, Harper Lethin, Kazutaka Mogi, Takefumi Kikusai, Regina Sullivan, Robert C. Froemke. Oxytocin neurons enable the social transmission of maternal behavior, submitted to **Science**

Tirko NN, Eyring KW, **Carcea I**, Mitre M, Chao MV, Froemke RC, Tsien, RW, Oxytocin Transforms Firing Mode of CA2 Hippocampal Neurons, **Neuron** 2018

Insanally MN, **Carcea I**, Albanna BF, Froemke, RC, Nominally non-responsive frontal and sensory cortical cells encode task-relevant variables, BioRxiv

Carcea I, Insanally MN, Froemke RC, Dynamics of cortical activity during behavioral engagement and auditory perception, **Nature Communications** 2017; 8: 14412; PMC5309852

Ouyang J, **Carcea I**, Schiavo JK, Jones KT, Rabinowitsch A, Kolaric R, Cabeza de Vaca S, Froemke RC, Carr KD, Food restriction induces synaptic incorporation of calcium-permeable AMPA receptors in nucleus accumbens, **Eur J Neurosci** 2017; 45(6):826-836; PMC5359088

Froemke*** RC, **Carcea*** I**, Barker AJ, Yuan K, Seybold B, Martins ARO, Wachs M, Levis PA, Polley DB, Merzenich MM, and Schreiner CE, Long-term modification of cortical synapses improves sensory perception, **Nature Neuroscience** 2013; 16(1): 79-88; PMC3711827

Carcea I, Patil SB, Robison AJ, Mesias R, Huntsman MM, Froemke RC, Buxbaum JD, Huntley GW, Benson DL, Maturation of cortical circuits requires Sema7A, **Proc Natl Acad Sci U S A** 2014; 111(38): 13978-83; PMC4183324

Carcea I., Ma'ayan,A., Mesias,R., Sepulveda,B., Salton, S.R.J., Benson, D.L., Flotillin-mediated endocytic events dictate cell-type specific responses to Semaphorin 3A, **Journal of Neuroscience** 2010; 30(45): 15317-29; PMC3496384

Sepulveda B., **Carcea I.**, Zhao B., Salton S.R., Benson D.L, L1 cell adhesion molecule promotes resistance to alcohol-induced silencing of growth cone responses to guidance cues. **Neuroscience** 2011; 180: 30-40; PMC3070798

Mintz***, C. D., **Carcea*****, I., McNickle, D. G., Dickson, T.C., Ge, Y., Salton, S. R. J., Benson, D. L., ERM proteins regulate growth cone responses to Sema3A, **Journal of Comparative Neurology** 2008; 510(4): 351-66; PMC2691689

Review articles & Book chapters

Carcea I, Froemke RC, Biological Mechanisms for Observational Learning, **Curr Opinion in Neurobiology** 2018 (in press)

Froemke RC, **Carcea I**, Oxytocin and brain plasticity, **Principles of Gender-Specific Medicine**, 2016.

Carcea I, Benson DL, Visualizing and Characterizing Semaphorin Endocytic Events using Quantum Dot conjugated proteins, **Methods in Molecular Biology, Elsevier**, 2016.

Carcea I, Froemke RC, Cortical plasticity, excitatory-inhibitory balance, and sensory perception, **Progress in Brain Research** 2013; 207: 65-90; PMID: 24309251

TEACHING AND OUTREACH

Cell and Developmental Biology, Teaching Assistant, Mount Sinai School of Medicine	2005
Molecular and Cellular Neuroscience, Teaching Assistant, Mount Sinai School of Medicine	2006
Molecular and Cellular Neuroscience, Lecturer on Axon Guidance, Mount Sinai School of Medicine	2010
Laboratory Instructor for Graduate and Undergraduate Students, Benson and Froemke Labs	2005-2016
Biology & Disorders of Learning & Memory, Teaching Assistant, Cold Spring Harbor Laboratory, NY	2013
SPiNES seminar organizer, New York University School of Medicine	2012-2014
Biology & Disorders of Learning & Memory, Student, Cold Spring Harbor Laboratory, NY	2011
Reviewed papers for the Journal of Neuroscience, Nature, Nature Neuroscience, Neuron and PNAS	2008-2016
Science and Engineering Fair Judge, New York Academy of Sciences	2007
Society for Neuroscience, student member	2005-2016
Association of Medical Students, Romania	1997-2003