

CURRICULUM VITAE

STEFANO VICINI

Google Scholar Link: <https://scholar.google.com/citations?user=jkKi6GQAAAAJ&hl=en>

PERSONAL INFORMATION:

Office Address: Department of Pharmacology and Physiology,
Georgetown University School of Medicine,
New Research Building, Room W213,
3900 Reservoir Road, N.W. Washington D.C. 20007
Tel 202 687-6441 office; 202 687-1567 laboratory; Fax 202 687-6441.
E-mail svicin01@georgetown.edu

EDUCATION:

(Italian University System)

Lyceum G. Ferraris, Torino, Italy

Majors: Mathematics and Physics

DEGREE:

Diploma

YEAR:

1975

Universita' degli Studi di Torino, Italy

Facolta' di Scienze MFN.

Biophysics

Doctorate

1979

PROFESSIONAL EXPERIENCE:

Research fellow at FIDIA Research Laboratory directed by Dr. Alfredo Gorio
Abano Terme, (PD) Italy.

1980-86

Postdoctoral visiting fellow in the late Dr. Stephen M. Schuetze laboratory
Dept. of Biological Science, Columbia University New York, N.Y.

1983-84

Research Associate at the Laboratory of Preclinical Pharmacology, National
Institute of Mental Health (NIMH), Saint Elizabeth Hospital, Washington D.C.

1985

Principal Investigator at the Fidia Georgetown Institute for the Neuroscience
lead by Prof. Erminio Costa and Research Assistant Professor in the Dept. of
Physiology and Biophysics, Georgetown University Medical School

1986-1990

P.I. at the FGIN and Assistant Professor in the Dept. of Physiology and Biophysics,
Georgetown University Medical School.

1990-1994

Associate Professor with “tenure” in the Dept. of Physiology and Biophysics,
Georgetown University Medical School.

1995-2000

Professor with “tenure” in the Dept. of Physiology and Biophysics, now Pharmacology & Physiology
Georgetown University Medical School

2000-Present

Adjunct Professor in the Dept. of Neurology at the Children’s Hospital of Philadelphia
Present

2011-

HONORS AND AWARDS:

Research Career Development Award 1993-1998 (1K04 NS-01680)
Research Development Award 1998-2003 (1K02 MH01680-01).
Excellence in Graduate Teaching Award Dept. of Pharmacology Georgetown 2000
Medical Center Graduate Student organization Award 2016
Kaiser Permanente Award for Excellence for Teaching in the Basic Sciences 2016

PROFESSIONAL SOCIETY:

American Physiological Society
Society for Neuroscience
International Brain Research Organization
Biophysical Society
Society for Neurochemistry

PUBLIC SERVICE:

Ad hoc reviewer for the Journal of Neuroscience, Journal of Neurophysiology, Science, Nature, Nature Neuroscience, PNAS, Journal of Physiology, Journal of Neurochemistry, Neuroscience, European Journal of Neuroscience, Journal of Pharmacology and Experimental Therapeutics, Neuropharmacology, Molecular Pharmacology, British Journal of Pharmacology, Neuroscience Letters, Journal of Neurochemistry, Neuron.

Editorial Boards:

Neuropharmacology	2000-2006
Journal of Physiology	2001-2005
Journal of Physiology (Senior Editor)	2006-2009
Journal of Neuroscience	2004-2009

Member of NINDS Special Emphasis Panel ZNS1 SRB-M (07) for the review of R35 Research Program Award applications 2018

Member of NINDS Program Project Grant (P01) NINDS/ZNS1 SRB-A(19) Review 2018

Member of the Neurotransporters, Receptors, Channels and Calcium Signaling [NTRC] Study Section review of Academic Research 2012-2017

Member of the Cellular, Molecular and Developmental Neuroscience Review Committee 4 NIH/CMDN4 Study section review of Academic Research 1998-2002

Member of the Neuropharmacology and Neurochemistry Review Committee NIMH/NPC Study section review of Academic Research 1996-1998

Member of the Behavioral and Neuroscience special emphasis panel ZRG1-NLS1-01A. Study section review of Academic Research Enhancement Awards (R15). 1993

Ad hoc reviewer for other NIH and NSF study sections.

UNIVERSITY SERVICE:

Director of the Graduate Program in Physiology & Biophysics 2007-2010
GUMC Research Committee 2006-2009
Member of the committee on Faculty (faculty promotion & tenure) 1997-1999, 2004- 2007.
Member of the Student Advisory Committee of the Interdisciplinary Program in Neuroscience 2000-2004
Research Integrity Committee 1995-2005. Chair 1999-2004, 2013 - 2017
Interviews to the applicants to the Medical School.
Chair of Research Committee Dept of Pharmacology & Physiology 2018-present
Member of Medical Center Research Committee 2018-present

Thesis defense committee: *Dept of Biology*, Jim Dougherty, Jamuna Subramaniam, Epolia Ramadan; *Dept. of Biochemistry and Cell Biology*, Marco Favaron; *Dept of Pharmacology*, Jean Marc Mienville, Charles T. Livsey, Anton Dunah; Bjorn Knollman, Gavin Rumbaugh, Maureen Cruz, Megan Janssen, Ruixi Luo, Patrick Hussman, Amanda Lewin, Nour Al Muhtasib *Dept of Physiology and Biophysics*, Yuang Chen, Donna McPhie, Wei Jian Zhu, Richard Frey, Jon Poling, Kathleen Ward, Dimitris Emfietzoglou, Jin Hong Li, Rupa Lalchandani *Interdisciplinary Program in Neuroscience*, Byeung Kim., Jill Turner, Esther Krook Magnusson, Craig Dietrich, Brent Richards, Pavel Ortinski, Stuart Washington, Scott Paluszkiwicz ,Kristen Ade, Li Feng, Melissa Herman, Mary Adedoyin, Brian Wolfe, Rachel Wurtzman, Brandon Martin, Bridget Queenan, Rachel Wurtzman, Carissa Winland Adam Caccavano, Stephanie Sloley, Alberto Sepulveda Rodriguez, Safwan Hydar.

INVITEDLECTURES:

XIVth Collegium Internationale Neuro-Psycopharmacologicum. Puerto Rico USA. (1986).
International Wenner-Gren Center Symposium, Stockholm, Sweden, (1987).
5th Capo Boi Conference on Neuroscience Capo Boi Italy (1987).
XVIth Collegium Internationale Neuro-Psycopharmacologicum. Munich Germany. (1988).
Marine Biological Laboratory - Woods-Hole MA (1988).
International symposium on Amino acids, Moscow, Russia. (1988)
National Institute of Child Health & Development (1989).
International Meeting on Excitatory Amino Acids, Montegrotto, Italy (1990).
International School of Neuroscience Praglia Italy (1990).
Third IBRO World Congress of Neuroscience Montreal Canada (1991).
Neurosteroids and Brain Function Symposium New Orleans LA (1991).
International Symposium Allosteric Modulation of Amino Acid Receptors: Therapeutic Implications, Royal Society, London (1991).
International Conference on Excitatory amino acids. Yosemite, CA (1992).
CNRS Institut Alfred Fessard, Gif-sur-Yvette, France (1993).
National Institute of Child Health & Development NIH Bethesda MD (1994).
Johns Hopkins Medical School, Dept of Physiology (1994)
University of Maryland. Dept. of Pharmacology (1995).
Howard University, Dept of Physiology Washington DC (1995).
University of Minnesota Dept of Physiology and Neurocience (1996).
University of California Los Angeles. Brain Research Institute (1996).

University of Chicago Dept of Physiology (1997).
Winter Conference on Brain Research (1997).
University of Wisconsin Dept. of Neuroscience (1997).
Howard University, Dept of Pharmacology Washington DC (1997).
Winter Conference on Brain Research (1998) (session organizer)
University of Connecticut, Dept of Neuroscience Storrs CT (1998).
SUNY Dept of Physiology Brooklyn NY (1998).
Winter Conference on Brain Research (1999).
Third International Meeting on Metabotropic Glutamate Receptors. Taormina Italy (1999).
Brown University Dept of Neuroscience (2000)
Medical College of OHIO, Toledo OH (2000)
Ohio State University Dept of Neuroscience Columbus OH (2000)
Howard University, Dept of Physiology Washington DC (2000)
University of Pittsburgh, Dept of Neuroscience (2001)
George Washington University, Dept of Anatomy (2001)
Gordon Conference on Excitatory Amino Acids, Florence, Italy (2001)
Duke University, Dept. of Neurology Durham NC (2002)
Medical College of Virginia, Dept of Anatomy Richmond VA (2002)
Italian Psychiatry Association, Rome Italy, (2002)
SUNY Dept of Physiology & Pharmacology (2003)
Northwestern University Dept of Physiology (2003)
Molecular mechanisms at the Synapse St Michaels MD (2004)
Howard University Dept of Physiology (2004)
University of Dundee Dept of Neurobiology and Physiology (2004)
Michigan State University, East Lansing Michigan (2004)
Winter Brain Research Conference Breckenridge Colorado (2005)
Gordon Conference on Inhibitory Interneurons New Hampshire (2005)
University of Notre Dame, Indiana (2005)
Dept of Neurology Georgetown University Grand Round (2005)
Medical College of Virginia, Dept of Pharmacology Richmond VA (2006)
Dept of Neurology Georgetown University Grand Round (2006)
Rutger University, New Jersey (2006)
Dept of Physiology Georgetown University (2006)
Dept of Neurology Georgetown University Grand Round (2006)
Winter Brain Research Conference Snowmass Colorado (2007)
Dept of Neurology Georgetown University Grand Round (2007)
University of Illinois at Chicago Dept Psychiatry (2007)
Gordon Conference on Inhibitory Interneurons Maine (2007)
University of Rome "La Sapienza", Rome Italy (2007)
Chinese Academy of Science Shanghai, China (2007)
Zhejiang University, Hangzhou, China (2007)
Experimental Biology Meeting San Diego, California (2008)
Karolinska Institute, Stockholm, Sweden (2008)
Boston University, Boston, MA (2008)
Scuola Normale Superiore, Pisa Italy (2008)
Society for Neuroscience (2008)

Dept of Physiology University of Pennsylvania, Philadelphia (2008)
Dept of Neuroscience University of Pittsburgh (2008)
Gordon Conference on Inhibitory Interneurons Maine (2009)
Society for Neuroscience Chicago (2009)
Winter Brain Research Conference Breckenridge Colorado (2010)
Dept of Neuroscience Jefferson University, Philadelphia.PA (2010)
Dept of Neuroscience University of Torino, Italy (2010)
Dept of Neuroscience University of Padova, Italy (2010)
Killian Lecture McGill University, Montreal Canada (2010)
Dept of Psychiatry University of Pennsylvania, Philadelphia (2010)
Dept of Neurology Children's Hospital of Philadelphia, PA (2011)
Technical University Munich Germany (2011)
Dept of Pharmacology and Physiology Georgetown University (2011)
Dept of Pharmacology, Physiology & Neuroscience George Washington University (2011)
Krasnow Institute, George Mason University (2012)
Uniformed Services University of the Health Sciences, Bethesda, Maryland (2013).
Northwestern University (2014)
University of Tennessee Memphis (2015)
Tuft University (2017)
Penn State (2017)

TEACHING ACTIVITY:

Medical School Students:

Course co-director Scientific Foundation I OMED-001-01	2017-present
Fundamentals of Human Physiology (#PBIO-574-01).	2000-2017
Fundamentals of Physiology (#BMED-604)	2011-2017
Course co-director Molecular Cellular Physiology Module IMSC-501-03	2008-2017
Cardiovascular Physiology Module IMSC-513-06	2008-2009
Human Physiology course for medical students (#PBIO-502).	1987-2007
Neurobiology course for medical students (#CBIO-512).	1992-2000
Neurobiology course for medical students (#NSCI-512).	2002-2007
Facilitator in the Problem Based Learning sessions in Physiology.	1994-1999
Introduction to Physiology (PBIO-584)	2007-2010

Students of the Master program in Physiology:

Lecturer at the Integrative Physiology course (#PBIO-535)	1991-2003
Lecturer at the Cell and Molecular Physiology course (#PBIO-534)	1992-1997

Graduate School Students:

Neurobiology Core part 2 (#NSCI-501)	2007-present
Graduate Pharmacology (#PHAR-551-01)	2011-Present
Lecturer in the Neuroscience Survey course (#NSCI-505)	1987,2005
Course director, Molecular Neurophysiology (#PBIO-547-01)	1991-2007
Introduction to Physiology (#PBIO-584)	Fall 2005

Stefano VICINI

Course co-director, Neurobiology I (#NSCI-501)	Fall '94-97
Course director, Neurobiology I (#NSCI-501)	Fall '98-06
Instructor in the summer Neurobiology course at the Marine Biology Laboratories, WoodsHole, Massachusetts.	1987,88,89
Visiting Professor University of Torino Italy	Fall 2019,2020

Hospital Residents:

Clinical Neurophysiology	2005-present
Lecturer to Psychiatry residents	1989, 1993
Lecturer to Pediatrics residents	1993, 1999
Lecturer to Neurology residents	2002-present

Supervision of Graduate Students:

Jean Marc Mienville, Thesis Advisor for Ph.D. in Pharmacology.	1985-1989.
Charles T. Livsey, Thesis Advisor for M.D.-Ph.D. in Pharmacology.	1990-1993.
Jon S.Poling Thesis Advisor for M.D.-Ph.D. in Physiology.	1993-1995.
Wei Jian Zhu Thesis Advisor for Ph.D. in Physiology.	1993-1995.
Jin Hong Li Thesis Advisor for Ph.D. in Physiology.	1996-1999.
Muyiwa Gbadegesin Thesis Advisor for Ph.D. in Neuroscience.	1996-1999.
Gavin Rambaugh Thesis Advisor for Ph.D. in Pharmacology.	1998-2000.
Pavel Ortinki Thesis Advisor for Ph.D. in Neuroscience.	2003-2007.
Congyi Lu Thesis Advisor for Ph.D. in Pharmacology.	2003-2007.
Kristen K Ade Thesis Advisor for Ph.D. in Neuroscience.	2005-2008
Megan Janssen Thesis Advisor for Ph.D. in Pharmacology	2007-2010
Jose Young Thesis Co-Advisor for Ph.D. in Physiology	2008-2010
Alfredo Gonzalez-Susler Thesis Co-Advisor for Ph.D. in Neuroscience.	2010-2013
Rupa Laldanchani Thesis Co-Advisor for Ph.D. in Physiology.	2010-2013
Bridget Queenan Thesis Co-Advisor for Ph.D. in Neuroscience.	2010-2014
Rachel Wurtzman Thesis Co-Advisor for Ph.D. in Neuroscience.	2010-2014
Ruixi Luo Thesis Advisor for Ph.D. in Pharmacology.	2011-2014
Amanda Lewin Thesis CoAdvisor for Ph.D. in Pharmacology.	2013-2016
Carissa Winland-Berger Thesis Co-Advisor for Ph.D. in Neuroscience..	2013-2017
Nour Muhtasib Thesis Advisor for Ph.D. in Pharmacology.	2014-2018
Alberto Sepulveda Rodriguez Thesis Advisor for Ph.D. in Neuroscience..	2014-2019
Adam Caccavano Thesis Advisor for Ph.D. in Neuroscience..	2016-2020
Selena Garcia DuBar Thesis CoAdvisor for Ph.D. in Pharmacology.	2016-Present

Supervision of Postdoctoral Fellows:

Mariella Bertolino, Ph.D.; Giulia Puia, Ph.D.; Ivica Ducic, M.D.; Tommaso Pizzorusso, Ph.D., Wei Jian Zhu M.D.; Jian Feng Wang, M.D.; Gabriella Stocca, Ph.D.; Lorenzo Corsi, Ph.D., Deidre O'Leary, Ph.D., Laura Borodisnki, Ph.D., Pylord Doe, M.D., Maddalena Cecon, Ph.D, Zhanyan Fu, Ph.D., Gabriele Losi, Ph.D, Kate Prybylowski, Ph.D., Andrea Barberis, Ph.D., Stephen M.Logan, Ph.D., John Partridge, Ph.D., Megan Janssen, Ph.D. Lorenza Bellusci, PhD, Irene Sanchez Bruha.

SCHOLARSHIP AND RESEARCH:

Present and Past Research Grants:

Present

- 1) R01 DK117508 Vicini (PI) 07/1/2018 – 06/30/2022
NIH/NIDDK effort 15% Annual Direct cost 250,000
GABAergic Interneurons Regulate Brainstem Neural Circuitry
To study functional roles and synaptic relations of SST and NPY GABAergic interneurons neuron in the Dorsal Vagal Complex and their regulation of gastric function.
Role PI

- 2) R01 HD 091994-01A1 effort 15% Forcelli (PI) 07/01/2018 – 06/30/2023
NIH/NICHD annual direct cost 250,000\$
Structural and functional sequelae of neonatal anticonvulsant exposure: drug-seizure interactions
The major goals of this project are to evaluate (1) the effect of hypoxia-induced seizures, (2) the effect of the three most common anti-seizure drugs used in babies (phenobarbital, phenytoin, levetiracetam), and (3) the efficacy of a neuroprotective intervention (melatonin).
Role: Co-Investigator

- 3) RF1 AG056603-01 Pak (PI)
8/15/2017-07/31/2022
NIA effort 5% annual direct cost 250,000\$
Regulation of APP processing in synaptic plasticity and Alzheimer's disease
The major goals of this project are to define physiological functions of APP in glutamatergic synaptic plasticity and identify novel targets for Alzheimer's disease therapeutics.
Role C0-PI

- 4) R21 AG066016-01A1 Pak (PI)
9/01/2020-8/31/2022
NIA effort 5% annual direct cost 125,000\$
Regulation of APP processing in synaptic plasticity and Alzheimer's disease
The major goals of this project are to define physiological functions of APP in glutamatergic synaptic plasticity and identify novel targets for Alzheimer's disease therapeutics.
Role C0-PI

- 5) R01 NS108810 Conant (PI) 07/01/2018 – 06/30/2023
Perineuronal proteolysis and circuit dysfunction in HIV
NIH/NINDS effort 10% annual direct cost 250,000\$

The major goals of this project are to evaluate the role of HIV related protein to regulate perineuronal net and hippocampal excitability and neurodegeneration.
Role: Co-Investigator

- 6) R01 NS107370 Burns (PI) 07/01/2018 – 06/30/2023
NIH/NINDS effort 5% annual direct cost 250,000\$
TAU independent effects of high frequency head impact on cognition and neurobehavior

The major goal of this project is to study the role of hippocampal circuitry in high frequency traumatic brain injury.

Role: Co-Investigator

- 7) R01NS121316: Burns (PI) 04/01/2021 – 03/31/2026
NIH/NINDS effort 10% annual direct cost ~1,000,000\$

Recovering amnesic memories from the repeat head impact brain

The major goal of this project is to study the changes in memory engrams in high frequency traumatic brain injury.

Role: Co-Investigator

Pending

NIH R01CA264180 (Kitlinska, Albanese) 07/01/2021-06/30/2026

NIH/NCI EFFORT 5% Annual Direct: \$2,234,279

Neuropeptide Y in prostate cancer progression: link between perineural invasion and bone metastasis.

This project investigates the role of neuronal and tumor-derived neuropeptide Y in prostate cancer dissemination to bone.

Past Support

- 1) R21 AG052780-01A1 Vicini (PI) 9/30/2016-4/30/2019

NIA effort 10% no cost extension Role co-Investigator

Optogenetic characterization of Corticotropin-releasing factor neurons of Barrington's Nucleus

To study functional properties and regulation of CRH neuron in BRN and their action in Locus Coeruleus.

Role PI

- 2) R56 NS104428-01 (Liu, Brown U)

02/01/2018 – 1/31/2019 0.60 calendar

NIH NINDS \$11,903 (subcontract only)

The role of the circadian molecular clock in refractory focal epilepsy

The major goal of this project is to determine if Clock plays a critical role in the progression of focal

epilepsies, and if rescuing defects associated with Clock can significantly increase seizure threshold.

Role: Site PI

- 3) GABA receptor and dopamine in striatum. R01MH64797-06 Principal Investigator: Stefano

Vicini NIH/NIMH. Amount: \$ 250,000 (annual direct cost). 40% effort

Period of Support May 2010 to March 2016.

- 4) Heterogeneity of synaptic NMDA Receptors

Principal Investigator: Stefano Vicini Agency: NINDS

R01 NS047700 Period June 1, 2007 to July 1, 2013 Role P. I.

Amount: \$ 218,000 (annual direct cost). 40% effort No cost extension

To study functional properties and regulation of NMDA receptors during development in cerebellum and striatum.

5) Cerebellar Inhibitory synapses in GABAR subunit KO mice.

Principal Investigator: Stefano Vicini NIH/NIMH

R01MH64797 Amount: \$ 200,000 (annual direct cost).

Period of Support March 2003 to February 2009 (no cost extension).

6) Heterogeneity of synaptic NMDA Receptors

Principal Investigator: Stefano Vicini Agency: NINDS

R01 NS047700-10 Period July 1, 2003 to June 30, 2007 Role P. I.

Amount: \$ 218,000 (annual direct cost).

7) Heterogeneity of synaptic NMDA Receptors.

Research Development Award

K02MH01680-01. Principal Investigator: Stefano Vicini NIH NIMH

Amount: \$77,370 (annual direct cost).

Period of support: December 1998 to November 2003

8) Brainstem nAChR subtypes and their effects on GI function.

R01 DK56920-01 Co. Investigator, 10% effort, ; P.I. Richard A. Gillis

Amount: \$225,000 (annual direct cost).

Period of Support January 2002 to December 2007

9) Heterogeneity of synaptic NMDA Receptors.

1 RO1MH58946-01 Principal Investigator: Stefano Vicini 30% effort.

Amount: \$ 188,958 (annual direct cost).

Period of Support April 1998 to January 2003.

10) CNS Control of Gastrointestinal Function.

2 RO1 DK29975 Co. Investigator, 10% effort, ; P.I. Richard A. Gillis

Amount: \$146,253 (annual direct cost).

Period of Support November 1993 to November 2001

11) Heterogeneity of GABA_A receptors in cerebellar synapses.

1 RO1 NS32759-01 Principal Investigator: Stefano Vicini 30% effort.

Amount: \$130,668 (annual direct cost). Period of Support

December 1994 to November 1999.

12) NMDA Receptors: Structure and Function.

1 RO1 NS36246-01-05 Co. Investigator, 10% effort, ; P.I. Barry B. Wolfe

Amount: \$ 163,670 (annual direct cost). Period of Support August 1997 July 2000.

13) Long term modifications of CNS excitatory synapses.

Research Career Development Award

Ass. # 1K04NS01680-01. Principal Investigator: Stefano Vicini Percent of Effort: 70%.

Amount: \$62,500 (annual direct cost).

Period of support: December 1993 to November 1998

14) Program project: Excitatory amino acids receptors in disorders R.A. Gillis Director
Identifying Project: Project # 3 Excitatory synapse modifications & cognitive disorders.

PO1 NS-78130. Principal Investigator: Stefano Vicini: 25 % effort.

Amount: \$69,300 (annual direct cost). Period of support: December 1990 to March 1998

PEER REVIEWED PUBLICATIONS (182)

Complete List of Published Work in My Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/stefano.vicini.1/bibliography/public/>

1. Caccavano A, Bozzelli PL, Forcelli PA, Pak DTS, Wu JY, Conant K, Vicini S. Inhibitory Parvalbumin Basket Cell Activity is Selectively Reduced during Hippocampal Sharp Wave Ripples in a Mouse Model of Familial Alzheimer's Disease. *J Neurosci.* 2020 Jun 24;40(26):5116-5136. doi: 10.1523/JNEUROSCI.0425-20.2020. Epub 2020 May 21. PubMed PMID: 32439703; PubMed Central PMCID: PMC7314414.
2. Cruz MT, Dezfuli G, Murphy EC, Vicini S, Sahibzada N, Gillis RA. GABAB Receptor Signaling in the Dorsal Motor Nucleus of the Vagus Stimulates Gastric Motility via a Cholinergic Pathway. (2019) *Front Neurosci.*;13:967. PubMed PMID: 31572117; PubMed Central PMCID: PMC6751316.
3. Li,P, Geng,X, Jiang,H, Caccavano,A Vicini,S and WuJ (2019) Measuring sharp waves and oscillatory population activity with the genetically-encoded calcium indicator GCaMP6f *Frontiers in Cellular Neuroscience, section Cellular Front Cell Neurosci.* PubMed PMID: 31275115; PubMed Central PMCID: PMC6593119.
4. Sepulveda Rodriguez, A, Li, P., Khan,T, Ma,J.D., Carlone, C.A. Bozzelli, P.L., Conant, K,E, Forcelli, P.A. and Vicini, S (2019) Electroconvulsive Shock Enhances Responsive Motility and Purinergic Currents in Microglia in the Mouse Hippocampus *eNeuro* 15 April 2019, 6 (2) *ENEURO*.0056-19.2019; DOI: <https://doi.org/10.1523/ENEURO.0056-19>.
5. Al-Muhtasib N, Forcelli PA, Conant KE, Vicini S. MMP-1 overexpression selectively alters inhibition in D1 spiny projection neurons in the mouse nucleus accumbens core. (2018) *Sci Rep.* Nov 1;8(1):16230. doi: 10.1038/s41598-018-34551-z. PubMed PMID: 30385861; PubMed Central PMCID: PMC6212422.
6. Al-Muhtasib N, Forcelli PA, Vicini S. Differential electrophysiological properties of D1 and D2 spiny projection neurons in the mouse nucleus accumbens core. *Physiol Rep.* 2018 Jul;6(13):e13784. doi: 10.14814/phy2.13784. PubMed PMID: 29962016; PubMed Central PMCID: PMC6026590.
7. Jiang H, Liu S, Geng X, Caccavano A, Conant K, Vicini S, Wu J. Pacing Hippocampal Sharp-Wave Ripples With Weak Electric Stimulation. *Front Neurosci.* 2018;12:164. doi: 10.3389/fnins.2018.00164. eCollection 2018. PubMed PMID: 29599704; PubMed Central PMCID: PMC5862867.
8. Al-Muhtasib N, Sepulveda-Rodriguez A, Vicini S, Forcelli PA. Neonatal phenobarbital exposure disrupts GABAergic synaptic maturation in rat CA1 neurons. *Epilepsia.* 2018 Feb;59(2):333-344. doi: 10.1111/epi.13990. Epub 2018 Jan 5. PubMed PMID: 29315524; PubMed Central PMCID: PMC6364562.

9. Sun ZY, Bozzelli PL, Caccavano A, Allen M, Balmuth J, Vicini S, Wu JY, Conant K. Disruption of perineuronal nets increases the frequency of sharp wave ripple events. *Hippocampus*. 2018 Jan;28(1):42-52. doi: 10.1002/hipo.22804. Epub 2017 Sep 26. PubMed PMID: 28921856; PubMed Central PMCID: PMC6047756.
10. Queenan BN, Dunn RL, Santos VR, Feng Y, Huizenga MN, Hammack RJ, Vicini S, Forcelli PA, Pak DTS. Kappa opioid receptors regulate hippocampal synaptic homeostasis and epileptogenesis. *Epilepsia*. 2018 Jan;59(1):106-122. doi: 10.1111/epi.13941. Epub 2017 Nov 8. PubMed PMID: 29114861; PubMed Central PMCID: PMC5774867.
11. Winland CD, Welsh N, Sepulveda-Rodriguez A, Vicini S, Maguire-Zeiss KA. Inflammation alters AMPA-stimulated calcium responses in dorsal striatal D2 but not D1 spiny projection neurons. *Eur J Neurosci*. 2017 Nov;46(9):2519-2533. doi: 10.1111/ejn.13711. Epub 2017 Oct 10. PubMed PMID: 28921719; PubMed Central PMCID: PMC5673553.
12. Li P, Fu X, Smith NA, Ziobro J, Curiel J, Tenga MJ, Martin B, Freedman S, Cea-Del Rio CA, Oboti L, Tsuchida TN, Oluigbo C, Yaun A, Magge SN, O'Neill B, Kao A, Zelleke TG, Depositario-Cabacar DT, Ghimbovski S, Knoblach S, Ho CY, Corbin JG, Goodkin HP, Vicini S, Huntsman MM, Gaillard WD, Valdez G, Liu JS. Loss of CLOCK Results in Dysfunction of Brain Circuits Underlying Focal Epilepsy. *Neuron*. 2017 Oct 11;96(2):387-401.e6. doi: 10.1016/j.neuron.2017.09.044. PubMed PMID: 29024662; PubMed Central PMCID: PMC6233318.
13. Partridge JG, Forcelli PA, Luo R, Cashdan JM, Schulkin J, Valentino RJ, Vicini S. Stress increases GABAergic neurotransmission in CRF neurons of the central amygdala and bed nucleus stria terminalis. *Neuropharmacology*. 2016 Aug;107:239-250. doi: 10.1016/j.neuropharm.2016.03.029. Epub 2016 Mar 22. PubMed PMID: 27016019.
14. Lewin AE, Vicini S, Richardson J, Dretchen KL, Gillis RA, Sahibzada N. Optogenetic and pharmacological evidence that somatostatin-GABA neurons are important regulators of parasympathetic outflow to the stomach. *J Physiol*. 2016 May 15;594(10):2661-79. doi: 10.1113/JP272069. PubMed PMID: 26959279; PubMed Central PMCID: PMC4865582.
15. Queenan BN, Lee KJ, Tan H, Haganir RL, Vicini S, Pak DT. Mapping homeostatic synaptic plasticity using cable properties of dendrites. *Neuroscience*. 2016 Feb 19;315:206-16. doi: 10.1016/j.neuroscience.2015.12.017. Epub 2015 Dec 14. PubMed PMID: 26701298; PubMed Central PMCID: PMC5493445.
16. Li Y, Partridge J, Berger C, Sepulveda-Rodriguez A, Vicini S, Conant K. Dopamine increases NMDA-stimulated calcium flux in striatopallidal neurons through a matrix metalloproteinase-dependent mechanism. *Eur J Neurosci*. 2016 Jan;43(2):194-203. doi: 10.1111/ejn.13146. PubMed PMID: 26660285; PubMed Central PMCID: PMC6047748.
17. Rozeboom AM, Queenan BN, Partridge JG, Farnham C, Wu JY, Vicini S, Pak DT. Evidence for glycinergic GluN1/GluN3 NMDA receptors in hippocampal metaplasticity. *Neurobiol Learn Mem*. 2015 Nov;125:265-73. doi: 10.1016/j.nlm.2015.10.005. Epub 2015 Oct 19. PubMed PMID: 26477834.
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