Bonnie Lynne Firestein, Ph.D.

Contact Information

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Academic Positions

2011-present	Professor, Department of Cell Biology and Neuroscience, Rutgers, the State University of New Jersey Associate Member, Department of Genetics, Rutgers, the State University of New Jersey (2009-present) Full Graduate Faculty Member, Department of Biomedical Engineering, Rutgers, the State University of New Jersey (2005-present) Member, Human Genetics Institute, Rutgers, the State University of New Jersey (2012-present)
2006-2011	Associate Professor (with tenure), Department of Cell Biology and Neuroscience, Rutgers, the State University of New Jersey
2000- 2006	Assistant Professor, Department of Cell Biology and Neuroscience, Rutgers, the State University of New Jersey

Education

1984-1988	University of Michigan, Ann Arbor B.S. (*High Honors*; Cellular and Molecular Biology)
1988-1995	University of California, San Diego M.S. (Neurosciences; awarded 1990) Ph.D. (Neurosciences; awarded 1995) Thesis**:** Examination of ATP receptors on MDCK-D1 cells. Advisor: Dr. Paul A. Insel

Postdoctoral Training

1995-2000	Postdoctoral Fellow, Department of Physiology, University of California, San Francisco, Advisor: Dr. David S. Bredt.

Fellowships and Awards

1984-1985	William Branstrom Prize, The University of Michigan, Top 5% of Freshmen
1984-1985	James B. Angell Scholar, The University of Michigan
1986	Sophomore Honors Award in the Natural Sciences, University of Michigan
1984-1988	The University of Michigan Alumnae Scholar
1984-1988	The University of Michigan Honors Convocation, (Dean's List)
1987	National Science Foundation Undergraduate Research, Opportunity Program, Stipend/Grant received for Honors Thesis work with Dr. Jill B. Becker

1987-1988	Mortar Board Honorary Society
1988	Honorable Mention, National Science Foundation, Graduate Fellowship
1988	University of California, Regents Fellow
1992-1993	Fellow, Advanced Predoctoral Fellowship in Pharmacology/Toxicology, Pharmaceutical Manufacturers Association
1994	Excellence in Renal Physiology Award, American Physiological Society
1996-1998	Awardee, NRSA Postdoctoral Fellowship, NICHD
1998-2000	Awardee, Paralyzed Veterans of America, Spinal Cord Research Foundation, Postdoctoral Fellowship
1998-2000	Awardee, Pharmaceutical Research Manufacturers of America Foundation, Postdoctoral Fellowship in Pharmacology/Morphology (declined)
2007	Nominee, Mentor of the Year Award, Rutgers College, Rutgers University
2008	Nominee, Professor of the Year, Graduate Student Association, Rutgers University
2008	NARSAD Toulmin Independent Investigator Award
2009	AHA Researcher of the Month (January 2009)
2012	Researcher of the Year, Northern New Jersey Regional Board of the American Heart Association/American Stroke Association, 15th Annual Affair of the Heart Ball
2013	2012 NARSAD Distinguished Investigator Award - Marion G. Nicholson Investigator
2013	Board of Trustees Award for Excellence in Research, Rutgers University
2013	Faculty Recognition Honoree, Rutgers University Football

Professional Societies and Committees

Society for Neuroscience, American Society for Cell Biology, Biophysical Society, Adhoc Committee for Library Purchases, Academic Senate (UCSF, 1996), Grade Appeals Committee (UCSD, 1989), Alpha Chi Sigma Professional Chemistry Fraternity (Corresponding Secretary, 1987-1988)

President, NJ Chapter Society for Neuroscience (2009-present)

Professional Activities

Journals

Editorial Board Member, *Open Neuroscience Journal* (2007-present)
Associate Editor, *The Journal of Neuroscience* (2008-present)
Editorial Board Member, *Developmental Neuroscience* (2009-present)
Editorial Board Member, *Journal of Tissue Science & Engineering* (2010-present)
Editorial Board Member, *Neuroscience* (2011-present)
Editorial Board Member, *Neurochemistry International* (2012-present)

Ad hoc reviewer for American Journal of Physiology, Annals of Biomedical Engineering, Brain Research, Current Biology, Developmental Biology, Developmental Neuroscience, EMBO Journal, EMBO Reports, European Journal of Biochemistry, FASEB Journal, Glia, Hippocampus, Journal of Alzheimer's Disease, Journal of Biological Chemistry, Journal of Cell Science, Journal of Comparative Neurology, Journal of Neuroscience, Journal of Neuroscience Research, Journal of Pharmacology and Experimental Therapeutics, Molecular Biology of the Cell, Molecular and Cellular Biology, Molecular and Cellular Neuroscience, Molecular

Pharmacology, Nature Cell Biology, Nature Neuroscience Reviews, Neurochemistry International, Neuroscience, Neuroscience Letters, PNAS, Tissue Engineering, and Trends in Cell Biology

Advisory Board, Bioscience Collaborative

Funding Agencies

2002	Reviewer, grant application to Netherlands Organization for Scientific Research (NWO, the Dutch research council)
2003, 2004	Ad hoc Reviewer, MDCN-2 SEP study section, NIH
2003-2007	Reviewer, Phillip Morris External Research Program
2003-2011	Permanent member, ZRG1 F03A study section (NRSA), NIH
2004-present	Ad hoc reviewer for National Science Foundation
2005-2006	Charter Member, New Jersey Commission on Traumatic Brain Injury Research
2006	Ad hoc reviewer, March of Dimes Foundation
2008	Ad hoc Reviewer, ZHD1 MRG-C 15 1 study section, NIH
2008-10, 2014	NSF, Organization Review Panel
2009-present	AHA, Brain Review Panel
2010-present	International Rett Syndrome Foundation Scientific Review Board
2010-present	Alzheimer's Association Review Board
2011	Ad hoc Reviewer STN study section, NIH
2012	Ad hoc Reviewer, ZRG1 MDCN-T (03) study section, NIH
2012-present	Reviewer, New York State Department of Health and the Empire State Stem Cell Board (NYSTEM), Neuroscience Study Section
2012	Co-Chair, Stroke 1 study section, AHA
2013-present	Chair, Stroke 1 study section, AHA

Rutgers University

2001-present	Rotation Advisor, Molecular Biosciences Graduate Program
2001-present	Rutgers College Honors Advising Program
2001-2003	CBN Faculty Retreat Committee
2001-2003	CBN Planning and Policy Committee
2001-2003	CBN Departmental Retreat Committee
2001-present	Admissions Committee, Molecular Biosciences Graduate Program Chair, 2007-present
2001-2009	Recruitment Committee, Molecular Biosciences Graduate Program Chair, 2006-2009
2001-4, 2007-11	CBN Mammalian Cell Biologist Faculty Search Committee Chair, 2007-2008, 2011-2012
2002-2004	CBN Curriculum Committee
2003-2004	Faculty of Arts and Sciences, Rutgers University, Nominating Committee
2003-2007	Executive Fellow, Livingston College
2004-present	SURF Review Committee
2006-present	Webpage Design Committee, Molecular Biosciences Program
2006-present	Webpage Design Committee, Department of Cell Biology and Neuroscience
2006-present	Biological Sciences Area Committee, Rutgers University/UMDNJ
2006-present	Animal Care and Use Committee (IUCAC)
2006-present	Executive Committee, CBN

2007-present	Busch Biomedical Research Grant Review Committee
2007-2010	Registration Disparities Committee, UMDNJ/Rutgers Universities
2008-present	Faculty Advisor, BRAIN (Bringing Rutgers Around in Neuroscience)
2009-present	Executive Council, Graduate School, Rutgers University
2009-present	President, NJ Chapter of Society for Neuroscience Participant, SfN Capitol Hill Day, March 25, 2010 Organizer, Symposium: Cutting Edge Neuroscience: From the Bench to Publishing - May 14, 2010
2010	I-Cubed strategic planning committee
2011-present	Aresty Faculty Review Board
2014	Rutgers University Appointment and Promotion Committee for Professor
2014	Rutgers University Faculty End of Year Awards

Other

2000-present	Judge for Siemens High School Science Competition
2001-present	Rutgers College Honors Advising Program, Honors Mentor
2001	Reviewed Armenicum, Experimental and Clinical Studies, Issue 2 for Lavipharm Laboratories Inc., East Windsor, NJ
2002	Advanced Placement Biology Exam, Reader
2009	Judge, FLL LEGO Robotics Competition, Boro Blast, Hillsborough, NJ
2009	Spokesperson to Hillsborough Middle School, Preventing Stroke, AHA sponsored
2009	Judge for AHA "Go Red: Survivor Stories," February 12, 2009
2009	February AHA Researcher of the Month
2009	Scientific Speaker, AHA Ball Kickoff Party
2010	Speaker, AHA Greater-Mercer Start! Heart Walk Kickoff
2013	Speaker, AHA Go Red Viewer Party Celebration
2014	Speak, CBN Society Spring Symposium
2014	Speaker, Molecular Biology and Biochemistry Society Graduation Dinner

Training of students and postdocs

Member of Molecular Biosciences Rutgers University/UMDNJ Joint Graduate Program – (Biochemistry, Cell and Developmental Biology, Pharmacology subprograms), Neurobiology Rutgers University/UMDNJ Joint Graduate Program, and Biomedical Engineering Graduate Program, Rutgers University

Undergraduate

Gary Riefler	2000	
Dana Eley	2001	
Gaithri Balsingam	2001-2003	(Honors Thesis)
·Nancy and Duncan MacMillan Award for Research Excellence		
Monica Hansen	2001-2003	
Eric Sceussi	2002	(Summer student)
Tamara Stawicki	2003-2004	
Ayelet Rosen	2003-2004	(Honors Thesis)
Christopher Chen	2004-2006	(Honors Thesis)
Aileen Chang	2004-2007	(Honors Thesis)
Michael Hayoun	2005-2006	(Honors Thesis; 2005 RISE/ISURF Student)

Laura Giusto	2005	(Summer student)
Courtney Mezzacapa	2005-2006	(College of NJ Student)
Marielle Terzulli	2005	
Sofia Machado	2006-2007	(2006 Aresty Sophomore RA Award)
Simran Sran	2006-2009	(Honors Thesis; 2006 Summer Aresty Award, 2007 SURF, BA/MD student)
Bo Wang	2006-2007	(2006 Summer Aresty Award)
Jessica Gallagher	2007-2008	
Vinayak Thakur	2007-2008	
Sean Lo	2007-2011	(Honors Thesis; 2008, 2010 SURF)
Christine Mau	2008-2010	(Honors Thesis; 2008 Summer Aresty Award, 2008 Aresty Poster winner)
John Azer	2008	
Matthew Schepel	2008-2009	
Vibhu Chandrashekhar	2009-2012	
Gregory Zegarek	2009-2011	(2009, 2010 SURF)
Vincent Luo	2009-2012	(Honors Thesis; 2009 Aresty Sophomore RA Award)
Keerthana Nalamada	2010	
Hersh Lakdawala	2010	(Summer student from Duke University)
Rachel Swanson	2010-2011	(Honors Thesis)
Emilie Transue	2011-2014	(2011 SURF; Honors Thesis)
Natasha Dudzinski	2011-2014	(2011 Aresty Summer RA; 2012 SURF; Henry Rutgers Honors Thesis Award)
James Narin	2011-2012	
Meera Trivedi	2012-present	(2012 Aresty Sophomore RA Award)
Bianca Pineda	2012-2013	(2012 Aresty Sophomore RA Award)
Nathalie Hecht	2012	
Tom Jauch	2013-2014	(2013 SURF; Honors Thesis)
Robert Fullem	2013	
Alvin Matthew	2013	
Elizabeth Chern	2013	(2013 Aresty Summer RA Award)
Karim Elmorshedy	2013-present	(2013 Aresty Sophomore RA Award)
Jose Alberto Negron	2013-2014	
Keith Campagno	2013-present	(2014 SURF)
Survandita Dhawan	2014-present	(2014 Aresty Summer RA Award)

Graduate

M.S.

Eric Sweet	2006-2007
Jason Cochran	2008-2010
Kara Mann	2011-present

Ph.D.

Vincenzo Guarnieri 2002-2003

- **Visiting student from University of Torino, Italy**

Barbara Akum-Ngudiankama 2002-2005

- **Rutgers nominee for The Council of Graduate Schools Dissertation Award**

·Currently a Senior Scientist at NIAID

Maxine Chen 2002-2006

·Currently a Marketing Liaison at GenScript

Kenyatta Lucas 2002-2007

·NIH NRSA Predoctoral Fellowship Awardee

·Currently a Technical Specialist at VWR

Harini Sundararaghavan 2004-2008 (co-mentored with David Shreiber)

·Currently an Assistant Professor at Wayne State University

Jose Fernandez 2005-2008

·NSF IGERT Fellow

·Currently a Senior Scientist at Signum Biosciences

·Recipient of NJCST Postdoctoral Fellowship

Michael Wininger 2005-2009 (co-mentored with William Craelius)

Michelle Previtera 2006-2009

·IGERT Predoctoral Fellow

·Bevier Dissertation Fellowship

·Currently Asst Prof., JFK Medical Center/Adjunct Asst Prof. Seton Hall

Munjin Kwon 2006-2012

·Currently Senior Scientist, Daewoong Pharmaceutical Co., Ltd.

Melinda Kutzing 2006-2011

·Currently an Associate Consultant at Scisive Consulting

Christopher Langhammer 2007-2009 (MD/PhD student)

·NJCSCR Predoctoral fellowship

·Currently a medical resident at UCSF

Eric Sweet 2007-2011

·Currently a Postdoctoral Associate at Mt. Sinai Medical Center

Chia-Yi Tseng 2006-2011

·Currently Asst. Professor at Chung Yuan Christian University in Taiwan

Daniel Komlos 2008-2011

·Currently medical student at NJ Medical School

Kristina Hernandez 2009-present

·IGERT Predoctoral Fellow

Ana Rodriguez 2011-present

Kate Fitzgerald 2012-present

·NJCBIR Predoctoral fellowship

Chen Liang 2012-present

Mihir Patel 2013-present

Przemyslaw Swiatkowski 2014-present

Rotation students: Harini Rajan, Kathy Kelly-Borja, Aliza Ricklis, Sayali Dixit, Kenyatta Lucas, Christopher Barbieri, Maxine Chen, Barbara Akum, Karla Mendoza, Larry Kramer, Jiaping Gu, Eric Sweet, Courtney O'Dell, Christopher Mozdzierz, Michelle Previtera, Munjin Kwon, Jean Parry, Wenjing Pan, Sun Pengling, Felicia Smith, Won Suk Lee, Courtney Mezzacappa, Jason Cochran, Abby Hare, Fred Lozy, Madel Durens, Aishwarya Deshpande, Kristina Hernandez, Kara Mann, Eileen Oni, Dana Mastrovito,

James Sanner, Chen Liang, Ina Nikolaeva, Kate Fitzgerald, Nathaly Salazar, Siow Chong Goh, Stephen Clarke, Moises de Jesus Cruz, Mihir Patel, Zhichao Song, Chen Wang, Nan Wang, Madeline Williams, Avery Zucco, Yijun Zhou, Alejandra Laureano, Zhenru Zhou, Ning Chiang, Katelyn Marshall

Postdoctoral Fellows

Erik Charych, Ph.D. 2004-2007

- **Pharmaceutical Research and Manufacturers of America Postdoctoral Fellowship**
- **Present Position: Senior Scientist at Lundbeck**

Yangzhou Du, Ph.D. 2004-2008

- **American Heart Association Postdoctoral Fellowship**
- **Present Position: Patent Lawyer at Gearhart Law**

Hongxin Chen, Ph.D. 2004-2009

- **Present Position: Research Associate, UMDNJ Newark**

Baogang Li, Ph.D. 2006-2007

Damien Carrel, Ph.D. 2007-2010

- **FRM fellowship**
- **NJCSCR Postdoctoral fellowship**
- **Present Position: Lecturer, Paris Descartes University**

Penelope Georges, Ph.D. 2007-2008

- **Present Position: Instructor, U Penn**

Norell Hadzimichalis, Ph.D. 2008-2010

- **Present Position:** *Outside-In*novation Associate, North America, R&D Sourcing & Consumer Science Group

Hyuck Kim, Ph.D. 2010-2012

- **Present Position: Research Associate, Rutgers University**

Vaishali Kulkarni, Ph.D. 2010-2011

Yue Zhuo, Ph.D. 2011-2012

- **Present Position: Associate Research Fellow, Center of Synthetic Biological Engineering Research, Guangzhou Institutes of Advanced Technology, Chinese Academy of Sciences**

Munjin Kwon, Ph.D. 2012-present

- **Present Position: Senior Scientist, Daewoong Pharmaceutical Co., Ltd.**

Jungho Park, Ph.D. 2012-2012

- **Present Position: Senior Scientist, KRIBB, Korea**

Harita Menon, Ph.D. 2013-present

Visiting Scientists

Janine Provost, High School Teacher, Livingston High School, NJ (Spring 2005)
Ralph Cardillo, Elementary School Science Teacher (Fall 2011)

High School Students

Maksym Marek Summer 2007

- **won third place in Biochemistry category at North Jersey Regional Science Fair**

Nirali Shah 2007-2009

- **won third place at Monmouth Junior Science Symposium**
- **selected for National Junior Science Symposium, awarded a $1500**

scholarship

Sneha Raghunathan	Summer 2010
Timothy Crocker	Summer 2011
Vikram Chandrashekhar	Summer-Fall 2011
Vikas Munjal	Summer 2013
Tej Naganathan	Summer 2013
Sarika Pawar	Summer 2013
Ellen Wu	Summer and Fall 2013
Michael Gao	Fall 2013
Adi Melamed	Summer 2014

Thesis Committees Served

Undergraduate

Vidhya Munnamalai	2004
Ashlee Van't Veer	2004
Erika Nothstein	2005
Joseph Kim	2006
Rebecca Tiver	2006
Prianka Bhattacharya	2007
Kristin Bridges	2007
Lauren Goddard	2007
Pushpa Keshav	2007
John Lee	2007
Melissa Wang	2007
Angela Zippilli	2007
Valentina Marcelli	2007
Michael Hayoun	2008
Gillian Generoso	2008
Nora Isack	2009
Cynthia Hung	2009
David Hammer	2010
Samuel Sacks	2010
Riju Banerjee	2011
Tina Biljani	2011
Christopher Franz	2011
Michael Fremed	2011
Teddy John Wohlbold	2011
Tal Ben Harush	2012
Chester Chia	2012
Pooja Kakar	2012
Neeti Patel	2012
Nicole Reich	2012
Tejash Shah	2012
Leonora Slatnick	2012
Lumeng Yu	2012
Rutu Dave	2013
Alex Ebeling	2013
Neel Patel	2013
Ali Saifuddin	2013
Tiwalade O. Adediji	2014

Punit Arora	2014
Ricardo Azevedo	2014
Michelle Chang	2014
Claire Delong	2014
Neha Kayastha	2014
Kinal Shah	2014

Masters	**Graduated**
Barbara Akum, Kean University	2002
Harini Rajan, Rutgers University, Molecular Biosciences Program	2003
Rebecca Amend, Rutgers University, Molecular Biosciences Program	2004
Kathy Kelly-Borja, Rutgers University, Molecular Biosciences Program	2004
Cyrus Chi, Rutgers University, Biomedical Engineering Program	2005
Dawn Lee, UMDNJ, Neuroscience Program	2007
Wei Zheng, UMDNJ, Neurobiology Program	2008
Carmen Rodriguez-Mateu, Rutgers University, Molecular Biosciences	2013
James Sanner, Rutgers University, Molecular Biosciences Program	2014

Doctoral	**Graduated**
Sujoy Bhattacharyya, New York University, Physiology and Neuroscience	2010
Shannon Bruse, Rutgers University, Molecular Biosciences Program	2007
Sunanda Baliga, Rutgers University, Molecular Biosciences Program	2009
Issa Bagayogo, UMDNJ, MD/PhD, Neurosciences Program	2009
Howard Chang, Rutgers University, Molecular Biosciences Program	2006
Yu-Wen Chang, Rutgers University, Molecular Biosciences Program	2007
Jiyeon Choi, UMDNJ, Neurobiology Program	2011
Jennifer Czerniawski, Rutgers University, Psychology Program	2010
Jean-Pierre Dolle, Rutgers University, Biomedical Engineering Program	2012
Shanique Edwards, Rutgers University, Molecular Biosciences Program	present
Rebecca Dryer, Rutgers University, Molecular Biosciences Program	2006
Brian Fernholtz, New York University, Physiology and Neuroscience	2006
Clifton Fulmer, UMDNJ, Neurobiology Program	2013
Ian Gaudet, Rutgers University, Biomedical Engineering Program	2012
Piya Ghose, Rutgers University, Neurobiology Program	2012
Abby Hare, Rutgers University, Molecular Biosciences Program	2013
Ye He, UMDNJ, Neurobiology Program	present
Ying Yuan Jean, UMDNJ, Molecular Biosciences Program	2008
Xue (Frank) Jiang, Rutgers University, Biomedical Engineering Program	2009
Tatiana Kazdoba, UMDNJ, Neurobiology Program	present
Silky Kamdar, UMDNJ, Neurobiology Program	2010
Hyun-Jong Kim, Rutgers University, Molecular Biosciences Program	2009
Jinyoung Kim, UMDNJ, Neurobiology Program	2009
Lawrence Kramer, Rutgers University, Molecular Biosciences Program	2011
Gum Hwa Lee, Rutgers University, Molecular Biosciences Program	2012
Denise Livingston, UMDNJ, Neurobiology Program	2006
Won Suk Lee, Rutgers University, Molecular Biosciences Program	2014
Lulu Li, Rutgers University, Biomedical Engineering Program	2009
Ying Li, Rutgers University, Biomedical Engineering Program	present

Jean Lo, Rutgers University, Biomedical Engineering Program	present
Jason Maikos, Rutgers University, Biomedical Engineering Program	2007
Bill Manley, Rutgers University, Molecular Biosciences Program	present
Olga Mozgova, Drexel University, Neurobiology Program	present
Ina Nikolaeva, Rutgers University, Molecular Biosciences Program	present
Eunchan Park, Rutgers University, Molecular Biosciences Program	2007
Jungho Park, Rutgers University, Molecular Biosciences Program	present
Chris Ricupero, Rutgers University, Molecular Biosciences Program	2011
Maria Nuria Royo-Gascon, Rutgers University, Biomedical Engineering	2011
Nathaly Salazar, Rutgers University, Molecular Biosciences Program	present
Viatcheslav Saviouk, Rutgers University, Molecular Biosciences Program	2008
Bryan Sepulveda, Mt. Sinai School of Medicine, Biomedical Sciences	2013
Gillian Silver, Rutgers University, Molecular Biosciences Program	present
Sagar Singh, Rutgers University, Biomedical Engineering Program	present
Minjung Song, Rutgers University, Biomedical Engineering Program	2007
Mai Soliman, Rutgers University, Molecular Biosciences	present
Norell Spiler-Hadzimichalis, Rutgers University, Integrative Physiology	2008
Bradley States, New York University, Physiology and Neuroscience	2002
Nawei Sun, Rutgers University, Molecular Biosciences Program	present
Evangeline Tzatzalos, Rutgers University, Biomedical Engineering Program	2012
Irving Vega, Rutgers University, Molecular Biosciences Program	2001
Andrew Voyiadjis, Rutgers University, Biomedical Engineering	2011
Sheng Wang, Rutgers University, Neurobiology Program	2007
Simon Warburton-Pitt, Rutgers University, Molecular Biosciences Program	present
Xilong Wu, Rutgers University, Molecular Biosciences Program	2013
Zhe Yu, Columbia University, Biomedical Engineering Program	2009
Donglei Zhang, Rutgers University, Molecular Biosciences Program	present

Teaching

Undergraduate

Advanced Neurobiology (Biology 146:445:01)
CBN Honors Seminar (Biology 146:405:01)
Immunology Laboratory (CBN 01:146:475)

Graduate

Advanced Neurobiology (Neuro 16:761:555:01)

Grant Support

Current

National Science Foundation IOS-1353724, 2014-2016, Total direct costs: ≈ $300,000, PI: Bonnie L. Firestein

New Jersey Commission Brain Injury Research, # CBIR14IRG019 (2014-2017), Total direct costs: ≈ $450,000, PI: Bonnie L. Firestein

New Jersey Commission on Spinal Cord Research, # CSCR14IRG005, (2014-2017), Total direct costs: ≈ $600,000, PI: Bonnie L. Firestein

Brain and Behavior Research Foundation – NARSAD Distinguished Investigator Award – Marion G. Nicholson Investigator – (2013-2015), Total direct costs: ≈ $93,000, PI: Bonnie L. Firestein

New Jersey Commission Brain Injury Research, #CBIR12MIG011 (2012-2015), Total direct costs: ≈ $600,000 (Firestein component), Project 2 Leader: Bonnie L. Firestein

New Jersey Commission Brain Injury Research Predoctoral Fellowship, 2013-2016, Total direct costs: ≈ $100,500, PI: Kate Fitzgerald (sponsor: Bonnie L. Firestein)

Previous

Rutgers Undergraduate Research Fellows Program, 2000-2001, Total direct costs: $2,500, PI: Bonnie L. Firestein

Charles and Johanna Busch Biomedical Grant, 2001-2003, Total direct costs: $20,000, PI: Bonnie L. Firestein

Charles and Johanna Busch Biomedical Grant, 2003-2005, Total direct costs: $30,000, PI: Bonnie L. Firestein

New Jersey Commission on Spinal Cord Research 03-004, 2003-2006, Total direct costs: $187,150, PI: Bonnie L. Firestein

National Science Foundation IBN‑0234206, 2003-2006, Total direct costs ≈ $320,000, PI: Bonnie L. Firestein

New Jersey Commission Spinal Cord Research 05B-O12-CRl, (2004-2006), Total direct costs: ≈ $30,000 (Firestein component), Co-PI: Bonnie L. Firestein, (PI: Noshir Langrana)

Rutgers Technology Commercialization Fund (2006-2007), Total direct costs: $20,000 PI: Bonnie L. Firestein

March of Dimes 1-FY04-107, 2004-2008, Total direct costs: $183,812, PI: Bonnie L. Firestein

Rutgers Technology Commercialization Fund (2007), Total direct costs: $20,000 PI: Bonnie L. Firestein

National Science Foundation IBN-0548543, 2006-2009, Total direct costs: ≈ $250,000, PI: Bonnie L. Firestein

National Institute of Mental Health 2 R01 MH062440-04, 2004-2009, Total direct costs: ≈ $260,000 (Firestein component) Co-Investigator: Bonnie L. Firestein, (PI: Linda Brzustowicz),

American Heart Association Grant in Aid 0555801T, 2005-2008, Total direct costs: $180,000, PI: Bonnie L. Firestein,

NJ Governor's Council on Autism Pilot Grant, 2005-2008, Total direct costs: $185,840, PI: Bonnie L. Firestein

National Science Foundation IGERT DGE 0333196, 2003-2008, Currently funding two graduate students, Faculty Participant, (PI: Prabhas Moghe)

Johnson and Johnson Biomedical Grant, 2006-2009, Total direct costs: $25,000, PI: Bonnie L. Firestein

NARSAD Independent Investigator Award, 2007-2009, Total direct costs: = $100,000, PI: Bonnie L. Firestein

New Jersey Commission on Spinal Cord Research 07A-019-SCR1, 2007-2009, Total direct costs: ≈ $330,000, PI: Bonnie L. Firestein

New Jersey Commission Spinal Cord Research, 07B-008-SCR1 (2007-2009), Total direct costs: ≈ $120,000 (Firestein component), Co-PI: Bonnie L. Firestein, (PI: Noshir Langrana)

Society for Neuroscience Spring 2010 Chapter Award, Total direct costs = $500. President: Bonnie L. Firestein

March of Dimes 1-FY08-464, 2008-2011, Total direct costs: $252,000, PI: Bonnie L. Firestein

New Jersey Commission Spinal Cord Research, 08A-008-SCR1 (2008-2010), Total direct costs: ≈ $120,000 (Firestein component), Co-PI: Bonnie L. Firestein, (PI: Noshir Langrana)

New Jersey Commission Brain Injury Research, BIR2 #08.004 (2008-2012), Total direct costs: ≈ $600,000 (Firestein component), Program Director and Project 1 Leader: Bonnie L. Firestein

Society for Neuroscience Spring 2011 Chapter Award, Total direct costs = $2000. President: Bonnie L. Firestein

National Science Foundation IGERT DGE 0801620, 2008-2013, Funded two graduate students, Faculty Participant, (PI: Prabhas Moghe)

NJ Governor's Council for Medical Research and Treatment of Autism 10-406-SCH-E-0, 2010-2013, Total direct costs: $469,550, PI: Bonnie L. Firestein

National Science Foundation IOS-0919747, 2009-2013, Total direct costs: ≈ $320,000, PI: Bonnie L. Firestein

Recent Seminars

1999 - November	University of Arkansas Medical Center, Host: Michael Jennings, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2000 - January	University of Texas at Austin, Host: George Bittner, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2000 - February	University of Iowa, Host: Gerald Gebhart, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2000 - February	The Cleveland Clinic, Host: Bruce Trapp, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2000 - February	Rutgers University, Host: Richard Triemer, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2000 - March	University of Minnesota, Host: Steven McLoon, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2000 - November	Eastern Virginia Medical School, Host: Earl Godfrey, Ph.D. Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2001 - January	Rutgers University, Women in Neuroscience Seminar Series Title: Neuronal Targeting by PDZ-domain Proteins and their Partners
2002 - November	Rutgers University, Women in Neuroscience Seminar Series Title: The Role of Cypin in Neuronal Development
2002 - June	Discussion Leader, "Synaptic Plasticity," Gordon Research Conference, Cell Biology of the Neuron
2004 - June	Short talk, Cell Biology of the Neuron, Gordon Research Conference Title: The Role of Cypin in Regulating Dendrite Number
2005 - March	Weill Medical College, Cornell University, Host: Samie Jaffrey, Ph.D. and Lorraine Gudas, Ph.D. Title: Pathways regulating dendrite morphology during neuronal development
2005 - March	Drug Discovery Forum, New Jersey Association for Biomedical Research Rutgers University Title: Cypin: Drug Target For Learning and Memory Disorders
2005 - March	University of Virginia, Charlottesville, Host: Thomas Sturgill, M.D., Ph.D. Title: Pathways regulating dendrite morphology during neuronal development
2005 - April	Tulane University, Host: Bradley Taylor, Ph.D. Title: The Role of Cypin in Neuronal Development
2005 - May	Louisiana State University Health Sciences Center, Neuroscience Center of Excellence, Hosts: Houhui Xia, Ph.D. and Roderick Corriveau, Ph.D. Title: The Role of Cypin in Neuronal Development

2005 - May	Rutgers University Title: Pathways regulating dendrite morphology during neuronal development Host: Wise Young, M.D., Ph.D.
2005 - October	Mt. Sinai School of Medicine, Hosts: Deanna Benson, Ph.D. and Cristina Alberini, Ph.D. Title: Pathways regulating dendrite morphology during neuronal development
2006 - June	Short talk, Cell Biology of the Neuron, Gordon Research Conference Title: Regulation of dendrite branching by PSD-95
2006 – September	Rutgers University, Women in Neuroscience Seminar Series Title: Growing and Protecting your Neurons
2006 – September	Indiana University, Bloomington, Neuroscience Colloquium, Host: Anne Prieto, Ph.D. Title: Regulation of Dendrite Patterning in Hippocampal Neurons
2006-October	Kean University, Host: Laura Lorentzen, Ph.D. Title: Regulation of Dendrite Patterning in Hippocampal Neurons
2007 – March	Invited Speaker, Dendrites: Molecules, Structure, and Function, Gordon Research Conference Title: Intrinsic regulation of dendrite number and branching
2007 – April	Coriell Institute, Neuroscience Proposal Development Workshop, Host: Roderick Corriveau, Ph.D. Title: Uric Acid: treatment for spinal cord injury
2007 – September	Drexel University, Host: Peter Baas, Ph.D. Title: To branch or not to branch? That is the question
2007- September	UMDNJ, RWJMS, Neuroscience Graduate Program Orientation Title: The Ins and Outs of Dendrite Branching
2007 – October	UMDNJ, Newark, Host: Steven Levison, Ph.D. Title: Pathways regulating dendrite morphology during neuronal development
2008-March	The University of Toledo Medical School, Host: Marthe Howard, Ph.D. Title: The Ins and Outs of Dendrite Branching
2008-April	Invited Speaker, AHA Board Meeting Title: Recovery from stroke: keeping neurons spiny
2008-May	Merck Innovation meeting Title: Cypin: Drug Target For Cognitive Disorders
2008-December	Kean University, Host: Laura Lorentzen, Ph.D. Title: Regulation of Dendrite Patterning in Hippocampal Neurons
2009-March	Rutgers University, Nutritional Sciences, Host: Malcolm Watford, Ph.D. Title: Guanine Deamination and Neuronal Development
2009-June	Rutgers University, Department of Genetics, Host: Jay Tischfield, Ph.D. Title: The Role of NOS1AP in Forebrain Development
2009-August	Rutgers University, New Faculty Orientation Panel Moderator and Speaker, "If I Knew Then What I Know Now"
2009-November	Mighty Mouse Symposium, Rider University Unraveling Biological Problems in Psychiatric Disorders, Host: Joanne Gere
2009-December	Plenary Lecture, 18th Annual Puerto Rico Neuroscience Conference Host: Irving Vega, Ph.D. Title: The Ins and Outs of Dendrite Branching
2010-March	Temple University, Host: Raymond Habas, Ph.D.

	Title: The Ins and Outs of Dendrite Branching
2010-June	Invited speaker, Northeast Regional Meeting of the American Chemical Society (NERM) 2010 Session: Biology and Physiology of Stem Cells in the CNS Title: Regulation of dendrite arborization by substrate stiffness
2010-August	Max-Delbrück-Center for Molecular Medicine, Berlin, Germany Host: Alistair Garratt, Ph.D. Title: The Ins and Outs of Dendrite Branching
2010-December	Rockefeller University, Host: Bruce McEwen, Ph.D. Title: The Ins and Outs of Dendrite Branching
2011- July	Brain Health Institute Inaugural Symposium Rutgers University Title: Cellular Aspects of NOS1AP in Schizophrenia
2011-August	PA Drug Discovery Institute Host: Allen Reitz, Ph.D. Title: Dendrites: Branching from the Inside Out
2011-November	University of Valencia, Spain Host: Francisco Olucha-Bordonau Title: Dendrites: Branching from the Inside Out
2011 – November	Rutgers University, BESS Faculty Luncheon Title: Interdisciplinary Approaches to Studying Neuronal Development
2011-November	Rutgers University, Host: Cell Biology and Neuroscience Society Title: The Ins and Outs of Dendrites: Focus on Schizophrenia
2011-December	University of Rochester SOM, Host: Margot Mayer-Proschel, Ph.D. Title: The Ins and Outs of Dendrite Branching
2012-February	Temple University, Host: Thomas Gould, Ph.D. Title: Dendrites: Branching from the Inside Out
2012-October	University of Pennsylvania, Host: David Meaney, Ph.D. Title: Glutamate-induced neurotoxicity: Morphological and microelectrode array studies
2013-March	Georgia Regents University, Host: Erhard Bieberich, Ph.D. Title: Dendrites: From Basic Science to Cognitive Disorders
2013-May	Georgetown University School of Medicine, Host: Nady Golestaneh, Ph.D. Title: Cellular Aspects of NOS1AP in Schizophrenia
2013-June	Shriners Pediatric Research Center, Host: Toby Ferguson, M.D.,Ph.D. Title: Dendrites: From Basic Science to Cognitive Disorders
2013-June	Yale University, Host: Tony Koleske, Ph.D. Title: Dendrites: From Basic Science to Cognitive Disorders

Interviews (Television, radio, newspaper)

January 2002	NJ News 12: HP68's role in HIV production
January 2002	NJ Network, Channel 13: HP68's role in HIV production
January 2002	The Star Ledger
March 2002	RUTV: By the Book: Science Edition, HIV: A Hijacker of Cells
January 19, 2004	The London Independent, Memory Pill
January 22, 2004	The Ken Hamblin Show (Syndicated radio show)
February 2, 2004	Businessweek, Innovations section
February 6, 2004	A Touch of Grey (Syndicated radio show)

February 24, 2004	ScienCentral, "Wiring the Brain," (90 second segment aired on 20-25 ABC affiliates nationwide)
February 24, 2004	The Davis Rankin Show (Syndicated radio show)
Jan/February 2004	Rutgers Focus, The Targum, and ScienceDaily
June 8, 2004	ScienCentral, "Brain Connections," (90 second segment aired on 20-25 ABC affiliates nationwide)
Jan/February 2005	Faculty of Arts and Sciences Newsletter
August 29, 2005	WMBC-TV: Snapin: a protein with therapy potential for autism
October 13, 2005	WMBC-TV: Treatment for Psychiatric Disorders
October 2005	Rutgers Focus, The Targum, and ScienceDaily
January 4, 2007	The Star Ledger, "Rutgers Study: Uric Acid Aids Spine Injuries"
January 17, 2007	The Targum
January 2007	The World Journal, Story on our uric acid discovery in Chinese
January 24, 2007	Rutgers Focus
August 2007	ScienceDaily, "Brain Cell Development Process Implicated In Mental Retardation Uncovered"
February 8, 2009	Courier News, "Rutgers professor aim to help stroke victims through research"
February 9, 2009	Home News Tribune, "Hillsborough woman doing important research at Rutgers about stroke"
November 3, 2011	Rutgers Today, "Protein wards off stroke damage"

Patents

Awarded

U.S. Patent No. US7338769 B2 METHODS FOR IDENTIFYING AGONISTS OF CYPIN; published 3/4/08.

U.S. Patent No. US7790843 B2 CYPIN POLYPEPTIDE AND FRAGMENTS THEREOF; published 09/07/2010.

U.S. Patent No. US7888461 B2 SNAPIN AND METHODS FOR REGULATION OF MICROTUBULE ASSEMBLY AND DENDRITE GROWTH AND BRANCHING; published 02/15/11.

U.S. Patent No. US8110348 B2 METHOD AND COMPOSITIONS FOR THE DIAGNOSIS AND TREATMENT OF SCHIZOPHRENIA (With Linda Brzustowicz). published 02/7/12.

U.S. Patent No. US8283440 B2 SNAPIN AND METHODS FOR REGULATION OF MICROTUBULE ASSEMBLY AND DENDRITE GROWTH AND BRANCHING; published 10/09/12.

U.S. Patent No. US8615311 B2 MICROELECTORODE ARRAY, METHODS FOR PREPARING THE SAME AND USES THEREOF. Published December 24, 2013.

Applications

20110136260	SNAPIN AND METHODS FOR REGULATION OF MICROTUBULE ASSEMBLY AND DENDRITE GROWTH AND BRANCHING. June 9, 2011.

20100248986 METHODS AND KITS FOR IDENTIFICATION OF ANTI-EXCITOTOXIC COMPOUNDS. September 30, 2010.

Publications

Original Articles in Refereed Journals

1. Kawaja, M.D., Fagan, A.M., Firestein, B.L. and Gage, F.H. (1991) Intracerebral grafting of cultured autologous skin fibroblasts into the rat striatum. An assessment of graft size and ultrastructure. Journal of Comparative Neurology, 307: 695-706.
2. Balboa, M.A., Firestein, B.L., Godson, C.M., Bell, K.S. and Insel, P.A. (1994) Protein kinase C mediates phospholipase D activation by nucleotides and phorbol ester in Madin-Darby canine kidney cells. Stimulation of phospholipase D is independent of activation of polyphosphoinositide-specific phospholipase C and phospholipase A_2. Journal of Biological Chemistry, 269: 10511-10516.
3. Insel, P.A., Firestein, B.L., Xing, M., Balboa, M.A., Post, S. and Jacobson, P. (1996) Signal transduction by P_2-purinergic receptors. Journal of Autonomic Pharmacology, 16(6): 311-3.
4. Firestein, B.L., Xing, M., Hughes, R.J., Corvera, C.U. and Insel, P.A. (1996) Heterogeneity of P_2-purinergic receptors and their signaling pathways in the regulation of phospholipases in Madin-Darby canine kidney cells. American Journal of Physiology, 271 (3 Pt 2): F610-8.
5. Xing, M., Firestein, B.L., Shen, G. and Insel, P.A. (1997) Dual role of protein kinase C in the regulation of $cPLA_2$-mediated arachidonic acid release by P_{2U} receptors in MDCK-D_1 cells: Involvement of MAP kinase-dependent and independent pathways. Journal of Clinical Investigation, 99(4): 805-14.
6. Firestein, B.L. and Bredt, D.S. (1998) Regulation of the proliferation of chick trigeminal ganglion cells *in vivo* and PC12 cells *in vitro* by cGMP-dependent protein kinase. Journal of Neurochemistry 71(5): 1846-1853.
7. Torres, R., Firestein, B.L., Staudinger, J., Dong, H., Olson, E.N., Huganir, R.L., Bredt, D.S., Gale, N.W. and Yancopoulis, G.D. (1998) PDZ proteins cluster and synaptically co-localize with Eph receptors and their ligands, the ephrins. Neuron 21:1453-1463.
8. Firestein, B.L. and Bredt, D.S. (1999) Interaction of neuronal nitric oxide synthase and phosphofructokinase-M. Journal of Biological Chemistry 274(15): 10545-10550.
9. Firestein, B.L., Brenman, J.E., Aoki, C., Sanchez-Perez, A.M., El-Husseini, A.E. and Bredt, D.S. (1999) Cypin - A Cytosolic Regulator of PSD-95 Postsynaptic Targeting. Neuron 24(3): 659-672.
10. El-Husseini, A.E., Craven, S.E., Chetkovich, D.M., Firestein, B.L., Aoki, C. and Bredt, D.S. (2000) Postsynaptic targeting and ion channel clustering by PSD-95 require transit through sorting endosomes. Journal of Cell Biology 148(1):159-172.
11. El-Husseini, A.E., Topinka, J.R., Lehrer-Graiwer, JE, Firestein, B.L., Craven, S.E., Aoki, C. and Bredt, D.S. (2000) Ion channel clustering by membrane associated guanylate kinases: Differential regulation by N-terminal lipid and metal binding motifs. Journal of Biological Chemistry, 275(31):23904-23910.
12. Lehrer-Graiwer, J.E., Firestein, B.L. and Bredt, D.S. (2000) Nitric oxide mediated induction of cytochrome c oxidase mRNA and protein in a mouse macrophage cell line. Neurosci Lett. 288(2): 107-110.
13. Firestein, B.L., Craven, S.E. and Bredt, D.S. (2000) Postsynaptic targeting of MAGUK family proteins mediated by distinct N-terminal domains. NeuroReport, 11(16): 3479-3484.

14. Insel, P.A., Ostrom, R.S., Zambon, A.C., Hughes, R.J., Balboa, M.A., Shehnaz, D., Gregorian, C., Torres, B., Firestein, B.L., Xing, M and Post, S.R. (2001) P2Y receptors of MDCK cells: epithelial cell regulation by extracellular nucleotides. Clin. Exp Pharmacol Physiol. 28(4):351-354.
15. Köppen, M., Simske, J.S., Sims, P.A., Firestein, B.L., Hall, D.H., Radice, A.D., Rongo, C. and Hardin, J.D. (2001) Cooperative regulation of AJM-1 by Discs large and LET-413 controls junctional tightness of *Caenorhabditis elegans* epithelia. Nature Cell Biology, 3:983-991.
16. Firestein, B.L. and Rongo, C. (2001) DLG-1 Is a MAGUK Similar to SAP97 and Is Required for Adherens Junction Formation. Molecular Biology of the Cell, 12(11):3465-3475.
17. Riefler, G.M. and Firestein, B.L. (2001) Binding of nNOS to CtBP changes the localization of CtBP from the nucleus to the cytosol. A NOVEL FUNCTION FOR TARGETING BY THE PDZ DOMAIN OF nNOS. The Journal of Biological Chemistry, 276(51):48262-48268.
18. Zimmerman, C., K. C. Klein, P. K. Kiser, A. R. Singh, B. L. Firestein, S. C. Riba, and J. R. Lingappa. (2002) Identification of a host protein essential for assembly of immature Human Immunodeficiency Virus type 1 capsids. Nature, 415(6867):88-92.
19. Riefler, G.M., Balasingam, G.*, Lucas, K.G.*, Wang, S., Hsu, S.C. and Firestein, B.L. (2003) Sec-8 binds to PSD-95: A novel interaction regulated by cypin. Biochemical Journal, 373:49-55. (*equal contributors) **This work was cited in Hoogenraad, C.C. and Sheng, M. The return of the exocyst. Nat Cell Biol. 2003 Jun; 5(6): 493-5.**
20. Akum, B.F., Chen, M.*, Gunderson, S.I.*, Riefler, G.M., Scerri-Hansen, M.M. and Firestein, B.L. (2004) Cypin regulates dendrite patterning in hippocampal neurons by promoting microtubule assembly. Nature Neuroscience, 7:145-152. (*equal contributors) **Cited by Faculty of 1000 (must read 8.0) and Science SAGE.**
21. Xu, B., Wratten, N., Charych, E.I, Buyske, S., Firestein, B.L., and Brzustowicz, L.M. (2005) Increased Expression in Dorsolateral Prefrontal Cortex of CAPON in Schizophrenia and Bipolar Disorder. PLoS Medicine, 2(9):e263.
22. Chen, M.*, Lucas, K.G.*, Akum, B.F., Balasingam, G., Stawicki, T.M., Provost, J.M., Riefler, G.M., Jörnsten, R.J. and Firestein, B.L. (2005) A novel role for snapin in dendrite patterning: Interaction with cypin. Molecular Biology of the Cell, 16(11):5103-14. (*equal contributors)
23. Van den Bergh, G., Clerens, S., Firestein, B.L., Bernat, K. and Arckens, L. (2006) Development and plasticity-related changes in protein expression patterns in cat visual cortex: a fluorescent two-dimensional difference gel electrophoresis approach. Proteomics, 6(13):3821-32.
24. Charych, E.I. *, Akum, B.F. *, Goldberg, J.S., Jörnsten, R.J., Rongo, C., Zheng, J.Q. and Firestein, B.L. (2006) Activity-independent Regulation of Dendrite Patterning by Postsynaptic Density Protein PSD-95. Journal of Neuroscience, 26(40): 10164-76. (*equal contributors) **Featured in This Week in the Journal.**
25. Du, Y., Chen, C.P., Tseng, C.Y., Eisenberg, Y. and Firestein, B.L. (2007) Astroglia-mediated effects of uric acid to protect spinal cord neurons from glutamate toxicity. Glia, 55(5):463-72.
26. Chen, H.X. and Firestein, B.L. (2007) Cypin acts downstream of RhoA to regulate dendrite branching in hippocampal neurons. Journal of Neuroscience, 7(31):8378-86.
27. Jiang, X.*, Georges, P.C.*, Li, B*., Du, Y., Kutzing, M.K., Previtera, M.L., Langrana, N.A. and Firestein, B.L. (2007) Cell growth in response to mechanical stiffness is affected by

neuron-astroglia interactions. The Open Neuroscience Journal, 1: 7-14. (*equal contributors)

28. Hadzimichalis, N.M., Baliga, S.S., Golfetti, R., Jaques, K.M., Firestein, B.L. and Merrill, G.F. (2007) Acetaminophen-mediated cardioprotection via inhibition of the mitochondrial permeability transition pore-induced apoptotic pathway. American Journal of Physiology – Heart and Circulatory Physiology, 293(6):H3348-55.
29. Fernandez, J.R., Welsh, W.J. and Firestein, B.L. (2008) Structural characterization of the zinc binding domain in Cytosolic PSD-95 interactor (CYPIN): Role of zinc binding in guanine deamination and dendrite branching. Proteins: Structure, Function, and Bioinformatics, 70(3):873-881.
30. Jiang, X., Yurke, B., Firestein, B.L., and Langrana, N.A. (2008) Neurite outgrowth on a DNA crosslinked hydrogel with tunable stiffnesses. Annals of Biomedical Engineering, 36(9):1565-79.
31. Gu, J., Firestein, B.L. and Zheng, J.Q. (2008) Microtubules in Dendritic Spine Development. Journal of Neuroscience, 28(46):12120-4.
32. Sweet, E.S. and Firestein, B.L. (2008) Neuronal polarization: Old cells can learn new tricks. Current Biology, 18(15):R661-R663.
33. Sundararaghavan, H.G., Monteiro, G.A., Firestein, B.L. and Shreiber, D.I. (2009) Generating gradients of mechanical properties in 3D collagen gels with microfluidics. Biotechnology and Bioengineering, 102(2):632-43.
34. Fernandez, J.R., Byrne, B. and Firestein, B.L. (2009) Phylogenetic analysis and molecular evolution of guanine deaminases: from guanine to dendrites. Journal of Molecular Evolution, 68(3):227-35.
35. Carrel, D. and Firestein, B.L. (2009) MicroRNA-mediated regulation of synaptic palmitoylation: shrinking fat spines. Nature Cell Biology, 11(6): 681-2.
36. Carrel, D.*, Du, Y. *, Komlos, D., Hadzimichalis, N.M., Kwon, M., Wang, B., Brzustowicz, L.M. and Firestein, B.L. (2009) NOS1AP regulates dendrite patterning of hippocampal neurons through a CPE-mediated pathway. Journal of Neuroscience, 29(25):8248-58.
37. Jiao, X., Chen, H., Chen, J., Herrup, K., Firestein, B.L. and Kiledjian, M. (2009) Modulation of Neuritogenesis by a Protein Implicated in X-linked Mental Retardation. Journal of Neuroscience, 29(40):12419-27.
38. Jiang, F.X. Yurke, B., Schloss, R.S., Firestein, B.L., and Langrana, N.A. (2010) The relationship between fibroblast growth and the dynamic stiffnesses of a DNA crosslinked hydrogel. Biomaterials 31(6):1199-212.
39. Jiang, F.X. Yurke, B., Schloss, R.S., Firestein, B.L., and Langrana, N.A. (2010) Effect of dynamic stiffness of the substrates on neurite outgrowth by using a DNA-crosslinked hydrogel. Tissue Engineering, Part A, 16(6):1873-89.
40. Previtera, M.L., Langhammer, C.G., and Firestein, B.L. (2010) Effects of Substrate Stiffness and Cell Density on Primary Hippocampal Cultures. Journal of Bioscience and Bioengineering, 110:459-70.
41. Hadzimichalis, N.M., Previtera, M.L., Moreau, M.P., Li, B., Lee, G.H., Dulencin, A.M., Matteson, P.G., Buyske, S., Millonig, J.H., Brzustowicz, L.M. and Firestein, B.L. (2010) NOS1AP protein levels are altered in BA46 and cerebellum of patients with schizophrenia. Schizophrenia Research, 124:248-50.
42. Langhammer, C.G., Zahn, J.D., and Firestein, B.L. (2010) Identification and quantification of skeletal myotube contraction and association in vitro by video microscopy. Cytoskeleton, 67(7):413-24.

43. Kutzing, M.K.*, Langhammer, C.G.*, Luo, V., Lakdawala, H., Raghunathan, S. and Firestein, B.L. (2010) Automated Sholl analysis of digitized neuronal morphology at multiple scales. Journal of Visualized Experiments, 45.
44. Previtera, M.L., Langhammer, C.G., Langrana, N.A., and Firestein, B.L. (2010) Regulation of Dendrite Arborization by Substrate Stiffness is Mediated by Glutamate Receptors. Annals of Biomedical Engineering 38:3733-43.
45. Langhammer, C.G, Previtera, M.L., Sweet, E.S., Sran, S.S., Chen, M. and Firestein, B.L. (2010) Multi-scale Sholl analysis of digitized neurons. Cytometry: Part A, 77(12):1160-8. **Highlighted "In This Issue."**
46. Fernandez, J.R., Sweet, E.S., Welsh, W.J., and Firestein, B.L. (2010) Identification of small molecule compounds with higher binding affinity to guanine deaminase (cypin) than guanine. Bioorganic & Medicinal Chemistry, 18:6748-6755.
47. Kramer, L.B., Shim, J., Previtera, M.L., Isack, N., Firestein, B.L., and Rongo, C.R. (2010) UEV-1 Is an Ubiquitin-Conjugating Enzyme Variant That Regulates Glutamate Receptor Trafficking in *C. elegans* Neurons. (2010) PLOS One, 5(12):e14291.
48. Sweet, E.S., Previtera, M.L., Fernández, J.R., Charych, E.I., Tseng, C.Y., Kwon, M., Starovoytov, V., Zheng, J.Q. and Firestein, B.L. (2011) PSD-95 alters microtubule dynamics via an association with EB3. Journal of Neuroscience, 31: 1038-1047.
49. Liu, A. Y-C., Mathur, R., Mei, N., Langhammer, C.G., Babiarz, B. and Firestein, B.L. (2011) Riluzole amplifies the HSF1- and GLT1-dependent cytoprotective mechanisms for neuronal survival. Journal of Biological Chemistry, 286(4):2785-94.
50. Sweet, E.S., Tseng, C.Y. and Firestein, B.L. (2011) To branch or not to branch: How PSD-95 regulates dendrites and spines. BioArchitecture 1(2), 69-73.
51. Langhammer C. G., Kutzing M., Luo V., Zahn J. D. and Firestein B. L. (2011) Skeletal myotube integration with planar microelectrode arrays *in vitro* for spatially selective recording and stimulation: A comparison of neuronal and myotube extracellular action potentials. Biotechnology Progress, 27(3):891-5.
52. Kutzing, M.K., Luo, V. and Firestein, B.L. (2011) Measurement of Synchronous Activity by Microelectrode Arrays Uncovers Differential Effects of Sublethal and Lethal Glutamate Concentrations on Cortical Neurons. Annals of Biomedical Engineering, 39(8):2252-62.
53. Kwon, M., Fernández, J.R., Zegarek, G.F., Lo, S.B. and Firestein, B.L. (2011) BDNF-promoted increases in proximal dendrites occurs via CREB-dependent transcriptional regulation of cypin. Journal of Neuroscience, 31(26):9735-45.
54. Tseng, C.-Y. and Firestein, B.L. (2011) The role of PSD-95 and cypin in morphological changes in dendrites following sublethal NMDA exposure. Journal of Neuroscience, 31(43):15468-80.
55. Kutzing, M.K., Luo, V. and Firestein, B.L. (2012) Protection from glutamate-induced excitotoxicity by memantine. Annals of Biomedical Engineering, 40(5):1170-81.
56. Royo-Gascon, N., Wininger, M., Scheinbeim, J.I., Firestein, B.L., Craelius, W. (2013) Piezoelectric substrates promote neurite growth in rat spinal cord neurons. Annals of Biomedical Engineering, 41(1):112-22.
57. Langhammer C. G., Kutzing M., Luo V., Zahn J. D. and Firestein B. L. (2013) A topographically modified substrate-embedded MEA for directed myotube formation at electrode contact sites, Annals of Biomedical Engineering, 41(2):408-20. **Cover article.**
58. Choo, A.M., Miller, W.J., Chen, Y.-C., Nibley, P., Patel, T.P., Goletiani, C., Morrison, B., Kutzing, M.K., Firestein, B.L., Sul, J.-Y., Haydon, P.G., Meaney, D.F. (2013) Antagonism of purinergic signaling improves recovery from traumatic brain injury. Brain: A Journal of Neurology, 136:65-80.

59. Komlos, D., Mann, K.D., Zhuo, Y., Ricupero, C.L., Hart, R.P., Liu, A.Y.-C, and Firestein, B.L. (2013) Glutamate dehydrogenase 1 and SIRT4 regulate glial development. Glia, 61(3):394-408.
60. Kwon, M. and Firestein, B.L. DNA transfection: Calcium Phosphate Method. (2013) Methods Mol Biol. 1018:107-10
61. Sweet, E.S., Langhammer, C.G., Kutzing, M.K. and Bonnie L. Firestein. Semi-automated Analysis of Dendrite Morphology in Cell Culture. (2013) Methods Mol Biol. 1018:261-8.

Review Articles

1. Firestein, B.L. (2000) Neuronal targeting by PDZ-containing proteins and their partners. Research Advances in Neurochemistry 1:51-58.
2. Kutzing, M.K. and Firestein, B.L. (2008) Altered Uric Acid Levels and Disease States. JPET, 324(1):1-7. (peer reviewed)
3. Fernandez, J.R. and Firestein, B.L. (2008) Novel pharmacological targets for controlling dendritic branching and growth during neuronal development. Central Nervous System Agents - Medicinal Chemistry 8(2):100-106. (peer reviewed)
4. Georges P.C.*, Hadzimichalis N.M.*, Sweet E.S. and Firestein B.L. (2008) The Yin-Yang of dendrite morphology: unity of actin and microtubules. Molecular Neurobiology, 38(3):270-84 (*equal contributors, peer reviewed).
5. Kulkarni, V.A. and Firestein, B.L. The Dendritic Tree and Brain Disorders. (2012) Mol Cell Neurosci. 50(1):10-20. (peer reviewed)

Book Chapters

1. Firestein, B.L. (2005) "Neuron Chemistry" in *Encyclopedia of Molecular Cell Biology and Molecular Medicine.* WILEY-VCH Verlag GmbH (Germany).
2. Firestein, B.L. (2008) "Neuron Chemistry" in *Neurobiology. From Molecular Basis to Disease.* WILEY-VCH Verlag GmbH (Germany).
3. Langhammer, C.G., Kutzing, M.K., Luo, V., Zahn, J.D. and Firestein, B.L. (2011) "Development of a Neural Interface for PNS Motor Control" in *Applied Biomedical Engineering.* Intech (Croatia).