CURRICULUM VITAE

NAME: **Gabriella D'Arcangelo**
OFFICE ADDRESS: Nelson Biological Laboratories B323
Rutgers, The State University of New Jersey
604 Allison Rd
Piscataway, NJ 08854, USA

ACADEMIC DEGREES:

B.S.	1986	University of Bari, Italy
Ph.D.	1993	State University of New York at Stony Brook

EDUCATION AND TRAINING:

1982-1986 Undergraduate studies in Biological Sciences, Department of Biochemistry, University of Bari, Italy. Experimental Thesis in Cell Biochemistry on mechanisms for the transport of thiamine in rat liver mitochondria.

1986-1987 Research internship: Department of Biochemistry, University of Bari, Italy. Research project on mitochondrial oxidative phosphorylation.

1987-1988 Exchange program: Department of Biochemistry, State University of New York at Stony Brook, Stony Brook, NY. Research project concerning purification of mitocondrial DNA polymerase. Advisor: Melvin Simpson, Ph.D..

1988-1993 Graduate Ph.D. program in Neurobiology, Department of Neurobiology and Behavior, State University of New York at Stony Brook, Stony Brook, NY. Research on nerve growth factor-induced gene expression and neuronal differentiation in PC12 cells. Thesis advisor Simon Halegoua, Ph.D..

1993-1995 Postdoctoral training, the Roche Institute of Molecular Biology, Nutley, NJ. Research project on mouse brain development. Mentor: Thomas Curran, Ph.D..

1995-1998 Postdoctoral training, Department of Developmental Neurobiology, St. Jude Children's Research Hospital, Memphis, TN. Continuation of research project on mouse brain development. Mentor: Thomas Curran, Ph.D..

PROFESSIONAL APPOINTMENTS:

1998-1999 Research Associate (faculty member) in the Department of Developmental Neurobiology, St. Jude Children's Research Hospital, Memphis, TN.

1999-2007 Assistant professor (tenure track) in the Department of Pediatrics- Section of Neurology and Developmental Neuroscience, Baylor College of Medicine, and Principal Investigator in the Gordon and Mary Cain Pediatric Neurology Research Foundation, Texas Children's Hospital.

2000- 2007 Joint appointments: Graduate Program of Developmental Biology and Department of Neuroscience at Baylor College of Medicine.

2005-2007 Joint appointment in the Translational Biology and Molecular Medicine Graduate Program at Baylor College of Medicine.

2007-2011 Associate Professor (tenure track), Department of Cell Biology and Neuroscience, Rutgers, the State University of New Jersey.

2008-present Joint appointments in the Molecular Biosciences Graduate Program in Cell & Developmental Biology, and the Graduate Program in Neuroscience at Rutgers/UMDNJ.
2011-present Associate Professor (with tenure), Department of Cell Biology and Neuroscience, Rutgers, the State University of New Jersey.
2012-present Joint appointment in the Graduate Program in Microbiology & Molecular Genetics at Rutgers/UMDNJ.

RESEARCH ACTIVITIES

GRANT AWARDS:

Current Awards

- Programmatic Multi Investigator grant (D'Arcangelo G, Overall Program Director and Principal Investigator for subproject #1)
  New Jersey Commission on Brain Injury Research
  The role of mTOR signaling in recovery after traumatic brain injury
  Project period: 6/01/12-5/31/15
  Direct costs for overall program per year: $ 600,000
  Direct costs for subproject #1 per year: $ 200,000
  Total costs for overall program: $ 2,034,000
  Total costs of subproject #1: $ 687,000

- 1 R21 NS089441 (D'Arcangelo G, Principal Investigator)
  National Institute of Health
  Identification of TSC cellular phenotypes using patient-derived iPSCs
  Project period: 09/30/14-06/30/16
  Direct costs: $ 275,000
  Total costs: $ 423,072

- 2014 Research Grant # 04-14 (D'Arcangelo G, Principal Investigator)
  Tuberous Sclerosis Alliance
  Developing TSC patient-derived iPSCs
  Project period: 12/01/14-11/30/15
  Direct costs: $ 68,182
  Total costs: $ 75,000

Past Awards

- Predoctoral Fellowship from Hoffmann La Roche, 1991-1993
- National Research Service Award from National Institute of Health, National Institute of Neurological Disease and Stroke 1994-1997
- St. Jude CCSG Developmental Funds, 1999-2000
- New Project Development Award – Mental Retardation Research Center, National Institute of Health 2000-2001
- Basil O'Connor Starter Scholar Research Award, The March of Dimes Birth Defects Foundation, 2000-2002

- National Institute of Health, National Institute of Child Health and Development, R03 HD39914 award, 2000-2002
- Junior Investigator Research Grant, the Epilepsy Foundation, 2002-2003.
- Young Investigator Award, National Alliance for Research on Schizophrenia and Depression (NARSAD), 2002-2004
- Baylor College of Medicine seed funds, 2002-2003
- Citizens United for Research in Epilepsy (CURE), The Rhode Island Award, 2005.
- MDA3683 award, Muscular Dystrophy Association.
- Fidelity Non-Profit Management Foundation grant award. 2006-07.
- Vivian Smith Foundation grant award 2007.
- 7 R01 NS042616, NIH/NINDS 2003-2009.
- 4 R01 NS042616-S1, NIH/NINDS 2005-2009. Supplement to promote diversity in health-related research
- 2007 Citizens United for Research in Epilepsy (CURE) Challenge Award
- 2009 Busch Biomedical Grant
- 2009 NARSAD Independent Investigator Award
- 2009 Research Grant from the New Jersey Governor's Council for Medical Research and Treatment of Autism
- DOD-CDMRP –TSCRP Exploration-Hypothesis Development Award, 2012-2014.

OTHER HONORS:

- Sigma XI award for excellence in research, 1992
- Graduate Program in Neurobiology and Behavior, SUNY at Stony Brook, Distinguished Alumnus Award 2003
- Recipient of the Essel Investigator Award, NARSAD, 2004
- Nominated for the Shaw Prize in Life Science and Medicine, 2005
- Honorable mention recipient of the 2006 Daniel X. Freedman Award, NARSAD
- Recipient of the Julie's Hope Award, CURE, 2007

PATENTS:

- Interaction of reelin with low density lipoprotein (VLDL) receptor for screening and therapies. Contributors: D'Arcangelo G and Curran T, St Jude Children's Research Hospital. Issued 11/27/01. Patent number 6323177.

PROFESSIONAL ACTIVIES:

<u>ad hoc reviewer for the following journals:</u>

- Neuron (2010 and 2014)
- International Journal of Developmental Neuroscience (2014)
- Ageing Research Reviews (2012)
- PlosONE (2008, 2009, 2013)
- Neuroscience (2012)
- Neural Development (2012)
- Journal of Neuroscience (multiple reviews 2005-2012)
- Developmental Neuroscience (2012)
- Molecular Neurodegeneration (2011)

- Progress in Neurobiology (2010)
- Brain (2010)
- Hippocampus (2009)
- Genesis (2008)
- Nature Medicine (2007)
- Nature Reviews Neuroscience (2006)
- Human Molecular Genetics (2006)
- Proceedings National Academy of Science (PNAS) USA (2001-2005)
- Cerebral cortex (2002, 2010, 2012)
- Molecular Brain Research (2002-2005)
- Developmental Brain Research (2002-2006)
- Journal of Comparative Neurology (2003-2004)
- Neuropathology and Applied Neurobiology (2004)
- Journal of Cell Biology (2005)
- Epilepsia (2005)
- Gene expression patterns (2001)

Ad hoc reviewer for the following granting agencies:

- Cure Autism Now Foundation, USA (2002)
- Fondazione Telethon, Italy (2003)
- Austrian Science Fund (FWF) (2003)
- Citizens United for Research in Epilepsy (CURE), USA (2003, 2008)
- National Institute of Health-CSR NCF Study Section (02/2004)
- National Institute of Health-CSR ZRG1 MDCN-D (03/2004)
- National Science Foundation (NSF) (2005)
- National Institute of Health-CSR DBD Study Section (06/2009)
- French National Research Agency (ANR) (2014)

Standing Member of Developmental Brain Disorders (DBD) Study Section, Center for Scientific Review, National Institute of Health, July 2009-June 2015 (2 study sections per year)

Scientist Reviewer of FY12 Tuberous Sclerosis Complex Research Program (TSCRP), Department of Defense's Congressionally Directed Medical Research Program (CDMRP)

- Cell Biology (CBY) Peer Review Panel, July 30, 2012
- Experimental Therapeutics & Diagnosis (ETDH) Peer Review Panel, July 31, 2012

Scientist Reviewer of FY14 Peer Reviewed Medical Research Program (PRMRP), Department of Defense's Congressionally Directed Medical Research Program (CDMRP)

- Discovery-Epilepsy-Fragile X Syndrome Peer Review Panel, September, 2014

Professional societies and congress activities:

- Society for Neuroscience (2003-current) - member
- Member of the Neurobiology Commission at the International Union of Physiological Sciences (IUPS) (2005-present)

- Invited organizer of Session I - Congress: Curing Epilepsy 2007: Translating Discoveries into Therapies, March 28-30, 2007, National Institutes of Health, Bethesda, Maryland

INVITED LECTURES:

NATIONAL

- Identification of a candidate gene for the mouse mutation reeler. 1994 Workshop in Mouse Molecular Neurogenetics, Bar Harbor, Maine.
- Of mice and molecules: identification of genes that control neurodevelopment. 1996 meeting of the Society for Neuroscience, Washington D.C. (Special lecture).
- Role of Reelin in postnatal development and synaptogenesis. 2002 meeting of the Society for Neuroscience, Program No. 516.1. Washington, DC.
- Reelin controls neuronal maturation and synaptogenesis. 2002 "Reeler and Friends" workshop, Orlando, FL.
- Understanding the biological consequences of Reelin deficiency in Schizophrenia and Bipolar Disorders. 2003 National Alliance for Research on Schizophrenia And Depression scientific symposium, New York City, NY.
- Reelin in the years. 2003 symposium, Department of Neurobiology and Behavior, State University of New York at Stony Brook, NY (Distinguished Alumnus Award lecture).
- Molecular and Cell Biology Affinity Group seminar series, The Scripps Research Institute, 2004.
- mTOR activation in focal cortical dysplasia. Epilepsy Research Forum, Texas Medical Center, 2005
- Identification of potential gene targets for cortical dysplasia. 2005 CURE Datablitz, Washington, D.C.
- Molecular Alterations in Cortical Dysplasia, Epilepsy Seminar Series at Children's Hospital Of Philadelphia (CHOP), 2006.
- Building the mammalian brain: molecules and mechanisms. UMDNJ, Piscataway, 2006.
- Targeting common signaling pathways in Cortical Dysplasia. C. Ljungberg and G. D'Arcangelo. Curing Epilepsy, NIH, Bethesda 2007.
- From human tissue to animal models: insights into the pathogenesis of cortical dysplasia. Merritt Putnam Symposium, American Epilepsy Society Annual Meeting, Seattle, WA, 2008.
- Reelin in the years: controlling neuronal migration and maturation in the mammalian brain. Neuroscience Seminar Series, Oklahoma Center for Neuroscience, Oklahoma City, 2009.
- Slide presentation in the symposium on "Reelin and Rockin': role of the extracellular matrix protein from development to cognition". 43rd Annual Winter Conference on Brain Research, Breckenridge, CO, 2010.
- Reelin in the years: regulating neuronal migration and maturation in the developing mammalian brain. Neuroscience Seminar Series at Georgetown University, February 2010.
- *Pten* mutant mice as models of cortical dysplasia. Neuroscience Seminar Series at The Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY, May 2010.
- Reelin in the years: controlling neuronal migration and maturation in the developing brain. University of Wisconsin-Madison John D. Wiley Waisman Center Seminar Series, October 2010.

- Reelin in the years: controlling neuronal migration and maturation in the developing brain. Virginia Commonwealth University, Department of Anatomy and Neurobiology Seminar Series, April 2011.
- Regulation of dendritogenesis and spine formation by Reelin. Keystone Symposium "ApoE, Alzheimer's and lipoprotein biology", Keystone, Colorado, February-March 2012.
- Pten and TSC in normal brain development and neurodevelopmental brain disorders. Advances in Child Health symposium, UMDNJ, New Brunswick, NJ June 2012.
- Reelin in the years: controlling neuronal migration and maturation in the mammalian brain. Child Health Institute of New Jersey, March 2013.
- Identification of TSC cellular phenotypes using patient-derived iPSCs. New Jersey Stem Cell Research Symposium, September 2013.

INTERNATIONAL

- *Reelin*: a gene deleted in the mouse neurological mutant reeler whose product is related to extracellular matrix proteins. 1995 Brain Extracellular Matrix Workshop, Ascona, Switzerland.
- The role of the Reelin pathway in cortical development. 2000 Society for Experimental Biology symposium "Neuronal stem cells, development and regeneration" Cambridge, UK.
- New insights into the function of the Reelin signaling pathway in cortical development. 2002 Forum of European Neuroscience, Paris, France.
- Novel activities of Reelin in postnatal nervous system development. 2003 meeting "Epigenetic Mechanisms, GABAergic Neurotransmission, Reelin And Psychosis", Santiago de Compostela, Spain.
- New molecular insights downstream of Reelin. Elba Neuronal Migration Meeting, September 17-19, 2004, Marciana Marina, Italy.

POSTER PRESENTATIONS (last 5 years)

1. Ventruti A, Domogauer J, Kazdoba TM, and **D'Arcangelo G**. The Role of Reelin in Forebrain Synapse Development. San Diego, CA: Society for Neuroscience, 2010.
2. Lee G-H, Kim S-H, Homayouni R, and **D'Arcangelo G**. Dab2IP-L regulates radial neuronal migration in the developing mouse neocortex. San Diego, CA: Society for Neuroscience, 2010.
3. Lugo JN, Sunnen CN, Brewster AL, Vanegas F, Parghi D, **D'Arcangelo G**, and Anderson AE. Intermittent mTOR inhibition is sufficient to block the epilepsy phenotype in NS-*Pten* conditional knockout mice. 44rd Annual Winter Conference on Brain Research, Keystone, CO, January 2011.
4. Ventruti A, Domogauer J, Kazdoba TM, and **D'Arcangelo G**. The Role of Reelin in Forebrain Synapse Development. Brain Health Institute Summer Symposium, July 2011
5. Lugo JNJr, Nguyen L, Sunnen CN, Brewster A, Vanegas F, D'arcangelo G, Anderson AE. Long-term mTOR inhibition is required to maintain suppression of the epilepsy phenotype in NS-Pten knockout mice. Program#/Poster#: 560.14/M12, 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011.
6. Lugo JN, Brewster A, Patil V, Nguyen L, Sunnen CN, Vanegas F, **D'Arcangelo G,** Anderson AE. Early mTOR inhibition is required to maintain long-term suppression of the epilepsy phenotype in NS-Pten knockout mice. Annual Meeting of the American Epilepsy Society, December 2011.

7. Kazdoba TM, Sunnen CN, Crowell B, Lee GH, Anderson AE, and **D'Arcangelo G**. Development and characterization of NEX-*Pten*, a novel forebrain excitatory neuron-specific knockout mouse. Human Genetic Institute of New Jersey 2nd Annual Research Day symposium, April 2012.
8. Kazdoba TM, Sunnen CN, Crowell B, Lee GH, Anderson AE, and **D'Arcangelo G**. Examination of the Role of Pten in Ionotropic Glutamate Receptor Expression. National Graduate Student Research Conference, October 2012, Bethesda, MD.
9. Trotter JH, Filonova I, Hoe H-S, **D'Arcangelo G**, and Weeber EJ. Disbled-1 is a critical regulator of adult synaptic plasticity and cognitive function. National Graduate Student Research Conference, October 2012, Bethesda, MD.
10. Kazdoba TM, Sunnen CN, Crowell B, Lee GH, Anderson AE, D'arcangelo G. Development and characterization of NEX-Pten, a novel forebrain excitatory neuron-specific knockout mouse. Program #/Poster # 548.23/G44. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
11. Nikolaeva IK, Crowell B, Valenziano J, Meaney DF and D'Arcangelo G. MTORC1 signal activation in the mouse hippocampus after traumatic brain injury. Rutgers Neuroscience Day, June 2014, Piscataway, NJ.
12. Nikolaeva IK, Crowell B, Valenziano J, Meaney DF and D'Arcangelo G. MTORC1 signal activation in the mouse hippocampus after traumatic brain injury. Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014.
13. Dal Pozzo V, Crowell B, Lee GH, and D'Arcangelo G. Complex neurological phenotype in mutant mice lacking Tsc2 in excitatory neurons of the developing forebrain. Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014.
14. D'Arcangelo G, Nikolaeva IK, Crowell B, and Kazdoba TM. Targeting the PI3K/Akt/mTOR pathway in an in vitro model of cortical dysplasia. Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014.

SCIENTIFIC PUBLICATIONS:

Peer-reviewed publications

1. **D'Arcangelo G**, Barile M, Passarella S and Quagliariello E. (1987) Uncoupling of mitochondrial oxidative phosphorylation by Hexetidine. *Biochem. Biophys. Res. Comm.* 147:801-808.
2. Thomas SM, Hayes M, **D'Arcangelo G**, Armstrong RC, Meyer BE, Zilberstein A, Brugge JS and Halegoua S (1991) Induction of neurite outgrowth by v-*src* mimics critical aspects of Nerve Growth Factor-induced differentiation. *Mol. Cell. Biol*. 11: 4739-50.
3. Kremer NE, **D'Arcangelo G**, Thomas SM, DeMarco M, Brugge JS and Halegoua S (1991) Signal transduction by Nerve Growth Factor and Fibroblast Growth Factor in PC12 cells requires a sequence of Src and Ras actions. *J. Cell Biol*. 115: 809-19.
4. Thomas SM, DeMarco M, **D'Arcangelo G**, Halegoua S and Brugge JS (1992) Ras is essential for Nerve Growth Factor- and Phorbol Ester-induced tyrosine phosphorylation of MAP kinases. *Cell* 68:1031-1040.
5. **D'Arcangelo G** and Halegoua S (1993) A branched signaling pathway for nerve growth factor is revealed by Src-, Ras-, and Raf-mediated gene inductions. *Mol. Cell. Biol*. 13:3146-55.
6. Wood KW, Qi H, **D'Arcangelo G**, Armstrong RC, Roberts TM and Halegoua S (1993) The cytoplasmic *raf* oncogene induces the neuronal differentiation of PC12 cells: a potential role

for cellular *raf* kinases in neuronal growth factor signal transduction. *Proc. Natl. Acad. Sci. USA*. 90:5016-20.

7. **D'Arcangelo G**, Paradiso K, Shepherd D, Brehm P, Halegoua S and Mandel G (1993) Neuronal growth factor regulation of two different sodium channel types through distinct signal transduction pathways. *J. Cell Biol.* 122:915-922.
8. Sharma N, **D'Arcangelo G**, Kleinklaus A, Halegoua S and Trimmer JS (1994) Nerve growth factor regulates the abundance and distribution of K+ channels in PC12 cells. *J. Cell Biol.* 123:1835-1843.
9. Miao GG, Smeyne RJ, **D'Arcangelo G**, Copeland N, Jenkins NA, Morgan JI and Curran T (1994) Isolation of a new allele of reeler by insertional mutagenesis. *Proc. Natl. Acad. Sci. USA* 23:11050-11054.
10. **D'Arcangelo G**, Miao GG, Chen S-C, Soares HD, Morgan JI and Curran T (1995) A protein related to extracellular matrix proteins deleted in the mouse mutant reeler. *Nature* 374:719-723.
11. Salton SRJ, Volonte' C, and **D'Arcangelo G** (1995) Stimulation of *vgf* gene expression by NGF is mediated through multiple signal transduction pathways involving protein phosphorylation. *FEBS Lett*. 360:106-110.
12. **D'Arcangelo G**, Miao GG and Curran T (1996) Detection of the *reelin* breakpoint in reeler mice. *Mol. Brain Res*. 39:234-236
13. **D'Arcangelo G**, Habas R, Wang S, Halegoua S and Salton SRJ (1996) Activation of co-dependent transcription factors is required for transcriptional induction of the *vgf* gene by Nerve Growth Factor and Ras. *Mol Cell Biol.* 16: 4621-4631.
14. **D'Arcangelo G**, Nakajima K, Miyata T, Ogawa M, Mikoshiba K and Curran T (1997) Reelin is a secreted glycoprotein recognized by the CR-50 monoclonal antibody. *J. Neurosci.,* 17:23-31.
15. De Silva U, **D'Arcangelo G**, Braden VV, Chen J, Miao GG, Curran T and Green ED (1997) The human Reelin gene: isolation, sequencing and mapping on chromosome 7. *Genome Res.,* 7:157-164.
16. Sheldon M, Rice DS, **D'Arcangelo G**, Yoneshima H, Nakajima K, Mikoshiba K, Howell BW, Cooper JA, Goldowitz D and Curran T (1997). *Scrambler* and *yotari* disrupt the *disabled* gene and produce a *reeler*-like phenotype in mice. *Nature*, 389: 730-733.
17. Goldowitz D, Cushing RC, Laywell E, **D'Arcangelo G**, Sheldon M, Sweet HO, Davisson M, Steindler D and Curran T (1997) Cerebellar disorganization characteristic of *reeler* in *scrambler* mutant mice despite presence of Reelin. *J. Neurosci*.17, 8767-8777.
18. Royaux I, Lambert de Rouvroit C, **D'Arcangelo G,** Demirov D and Goffinet AM (1997) Genomic organization of the mouse *reelin* gene. *Genomics*, 46, 240-250.
19. Alcantara S, Ruiz M, **D'Arcangelo G**, Ezan F, de Lecea L, Curran T, Sotelo C and Soriano E (1998) Regional and cellular patterns of *reelin* mRNA expression in the forebrain of the developing and adult mouse. *J Neurosci.* 18, 7779-7799.
20. Rice DS, Sheldon M, **D'Arcangelo G**, Nakajima K, Goldowitz D and Curran T (1998) *Disabled-1* acts downstream of *Reelin* in a signaling pathway that controls laminar organization in the mammalian brain. *Development* 125, 3719-3729.
21. Borrell V, Del Rio JA, Alcantara S, Derer M, Martinez A, **D'Arcangelo G**, Nakajima K, Mikoshiba K, Derer P, Curran T, and Soriano E (1999) Reelin regulates the development and synaptogenesis of the layer-specific entorhino-hippocampal connections. *J Neurosci.* 19, 1345-1358.

22. **D'Arcangelo G**, Homayouni R, Keshvara L, Rice DS, Sheldon M, and Curran T (1999) Reelin is a ligand for lipoprotein receptors. *Neuron* 24, 471-479.
23. Bernier, B, Bar I, **D'Arcangelo G**, Curran T, and Goffinet A.M. (2000) Reelin mRNA expression during embryonic brain development in the chick. *J Comp Neurol* 422, 448-463.
24. Quattrocchi C, Wannenes F, Persico AM, Ciafre' SA, **D'Arcangelo G**, Farace MG and Keller F. (2002) Reelin is a serine protease of the extracellular matrix. *J Biol Chem* 277, 303-309.
25. Deguchi K, Inoue K, Avila WE, Lopez-Terrada D, Antalffy BA, Quattrocchi CC, Sheldon M, Mikoshiba K, **D'Arcangelo G** and Armstrong DL (2003) Reelin and Disabled-1 expression in developing and mature human cortical neurons. *J Neuropathol Exp Neurol* 62, 676-684.
26. Assadi AH, Zhang G, Beffert U, McNeil RS, Renfro AL, Niu S, Quattrocchi CC, Antalffy BA, Sheldon M, Armstrong DA, Wynshaw-Boris A, Herz J, **D'Arcangelo G** and Clark GD (2003) Interaction of Reelin signaling and Pafah1b1 (Lis1) in brain development. *Nature Genet* 35, 270-276.
27. Niu S, Renfro AL, Quattrocchi CC, Sheldon M and **D'Arcangelo G** (2004). Reelin promotes hippocampal dendrite development through the VLDLR/ApoER2-Dab1 pathway. *Neuron* 41, 71-84.
28. Yabut O, Renfro A, Niu S, Swann JW, Marín O, and **D'Arcangelo G** (2007). Abnormal laminar position and dendrite development of interneurons in the *reeler* forebrain. *Brain Res.* 1140, 75-83.
29. Ljungberg MC, Bhattacharjee MB, Lu Y, Armstrong DL, Yoshor D, Swann JW, Sheldon M and **D'Arcangelo G** (2006). Activation of mammalian target of rapamycin in cytomegalic neurons of human cortical dysplasia. *Ann Neurol* 60, 420-429.
30. Zhang G, Assadi AH, McNeil RS, Beffert U, Wynshaw-Boris A, Herz J, Clark GD and **D'Arcangelo G** (2007) The Pafah1b Complex Interacts with the Reelin Receptor VLDLR. *PLoS ONE* 2:e252.
31. Assadi AH, Zhang G, McNeil RS, Clark GD and **D'Arcangelo G** (2008) Pafah1b2 mutations suppress the development of hydrocephalus in compound Pafah1b1;Reln and Pafah1b1;Dab1 mutant mice. *Neurosci Lett* 439, 100-105.
32. Niu S, Yabut O and **D'Arcangelo G** (2008) The Reelin pathway promotes dendritic spine development in hippocampal neurons. *J Neurosci* 28, 10339-10348.
33. Zhang G, Assadi AH, Roceri M, Clark GD and **D'Arcangelo G** (2009) Differential Interaction of the Pafah1b Alpha Subunits with the Reelin Transducer Dab1. *Brain Res* 1267, 1-8.
34. Ljungberg MC, Sunnen N, Lugo JN, Anderson AE, and **D'Arcangelo G** (2009) Rapamycin suppresses seizures and neuronal hypertrophy in a mouse model of cortical dysplasia. *Dis Model Mech* 2, 389-398.
35. Yabut O, Domogauer J and **D'Arcangelo G** (2010) Dyrk1A overexpression inhibits proliferation and induces premature neuronal differentiation of neural progenitor cells. *J Neurosci*, 30:4004-4014.
36. Zhang J, Li H, Yabut O, Fitzpatrick H, **D'Arcangelo G**, and Herrup K (2010) Cdk5 suppresses the neuronal cell cycle by disrupting the E2F1-DP1 complex. *J Neurosci* 30:5219-5228.

37. Ventruti A, Kazdoba TM, Niu S and **D'Arcangelo G** (2011) Reelin deficiency causes specific defects in the molecular composition of the synapses in the adult brain. *Neuroscience* 189:32-42.
38. Sunnen CN, Brewster AL, Lugo JN, Vanegas F, Turcios E, Mukhi S, Parghi D, **D'Arcangelo G** and Anderson AE (2011) Inhibition of the mammalian target of rapamycin blocks epilepsy progression in NS-*Pten* conditional knockout mice. *Epilepsia* 52:2065-2075.
39. Kazdoba TM, Sunnen CN, Crowell BC, Lee GH, Anderson AE, and **D'Arcangelo G** (2012) Development and characterization of NEX-Pten, a novel forebrain excitatory neurons-specific knockout mouse. *Dev Neurosci* 34:198–209.
40. Lee GW, Kim SH, Homayouni R and **D'Arcangelo G** (2012) Dab2ip regulates neuronal migration and neurite outgrowth in the developing neocortex. *PlosONE,* 7:e46592.
41. Rogers JT, Zhao L, Trotter JH, Rusiana I, Peters MM, Li Q, Donaldson E, Banko JL, Keenoy KE, Rebeck GW, Hoe HS, **D'Arcangelo G**, Weeber EJ (2013) Reelin supplementation recovers sensorimotor gating, synaptic plasticity and associative learning deficits in the heterozygous reeler mouse. *J Psychopharmacol* 27:386-395.
42. Trotter JH, Lee GH, Kazdoba TM, Crowell B, Domogauer J, Mahoney HM, Franco SJ, Muller U, Weeber EJ and **D'Arcangelo G** (2013) Dab1 is required for hippocampal synaptic plasticity and associative learning. *J Neurosci* 33, 15652-15668.
43. Lee GH, Chhangawala Z, von Daake S, Savas JN, Yates JR[3rd], Comoletti D, and **D'Arcangelo G** (2014) Reelin induces Erk1/2 signaling in cortical neurons through a non-canonical pathway. *J Biol Chem*. 289:20307-20317.

Other publications

Review Articles

1. Curran T and **D'Arcangelo G** (1998). Role of Reelin in the control of brain development. Brain Res. Reviews 26, 285-294.
2. **D'Arcangelo G** and Curran T (1998). *Reeler*: new tales on an old mutant mouse. BioEssays 20, 235-244.
3. **D'Arcangelo G.** (2005) ApoER2, a Reelin receptor to remember. *Neuron* (*Preview*), vol 17, pp 471-477.
4. **D'Arcangelo G.** (2006) Reelin mouse mutants as models of cortical development disorders. *Epilepsy Behav*, Vol 8, pp 81-90. Elsevier Press USA.
5. **D'Arcangelo G.** (2009) From Human Tissue to Animal Models: Insights into the Pathogenesis of Cortical Dysplasia. *Epilepsia*, Vol 50 (Suppl. 9), pp 28-33.
6. **D'Arcangelo G.** (2010) Rapamycin treatment suppresses epileptogenic activity in conditional *Pten* knock out mice. [Feature article] *Cell Cycle* 9:2487-2488.
7. Don ASA, Tsang CK, Kazdoba TM, **D'Arcangelo G** and Zheng XSF (2012) Current and Emerging Therapeutic Strategies for Traumatic CNS Injuries. *Drug Discovery Today* 17:861-868.
8. **D'Arcangelo G** (2014) Reelin in the Years: Controlling Neuronal Migration and Maturation in the Mammalian Brain" *Advances in Neuroscience*, vol. 2014, Article ID 597395. doi:10.1155/2014/597395.

Book chapters

1. **D'Arcangelo G**, Chen S-C, Morgan JI and Curran T. (1996) Identification of reelin: the gene responsible for the mouse neurodevelopmental mutation reeler. In: Integrative and Molecular

Approach to Brain Function, pp107-114. Elsevier Science press. M. Ito and Y. Miyashita, editors.

2. **D'Arcangelo G** and Curran T. (1999) Reelin. In: Guidebook to anchor, adhesion and extracellular matrix proteins. Oxford University Press. T. Kreis and R. Vale editors.
3. **D'Arcangelo G** (2001) The role of the Reelin pathway in cortical development. Symp Soc Exp Biol. Vol. 53, pp 59-73.
4. **D'Arcangelo G.** (2005) The *reeler* mouse: anatomy of a mutant. In: International Review of Neurobiology, GABA in Autism and Related Disorders, vol. 17, pp. 383-417. Elsevier Press USA, D. Dhossche and C Minor, editors.
5. Huang C-C and **D'Arcangelo G**. (2008) The Reelin Gene and Its Functions in Brain Development. In: Reelin Glycoprotein · Structure, Biology and Roles in Health and Disease. Springer Press, NY. Fatemi, S.H. (Ed.).

Other scientific writings

1. Miao GG, **D'Arcangelo G** and Curran T (1995) Transgenic serendipity: a short cut to the reeler gene. [In focus] *J. NIH Res.* 7:51.
2. **D'Arcangelo G** and Curran T (1995) Smart transcription factors. [News and Views] *Nature* 376:292-293.
3. Curran T, **D'Arcangelo G**, and Goffinet A (1995) Reeler gene discrepancies. [Correspondence] *Nature Genet.* 11:12-13
4. **D'Arcangelo G (2006).** [Comment]. Schizophrenia Research Forum 3/13/06.

TEACHING and TRAINING ACTIVITIES

Baylor College of Medicine (2000-2007)

Training grants and core centers (2000-07)

- Mentor, Multidisciplinary Training in Brain Disorders and Development (Swann J, Director), NIH training grant T32 NS43124
- Mentor, Molecular and Cellular Biology of Behavioral Medicine (Davis R, Director), NIH training grant
- Member, Mental Retardation and Developmental Disabilities Research Center (Zoghbi H, Director), NIH center
- Mentor, Underrepresented minority (URM) post-bac research training (Slaughter G, Director)
- Mentor, IMSD PhD. Student training (Slaughter G, Director), NIH training grant R25 GM56929

Didactic Teaching

- Course instructor 2002-2007, Neural Development. Graduate course DB#444-403J; NS#350-403J
- Lecture on neuronal migration. 2003 symposium (CME), Department of Ophtamology
- Lecture on the functions of Reelin in the development of the nervous system. Neurology Grand Rounds (CME), 2004.

Rutgers, the State University of New Jersey (2007-present)

Didactic Teaching

- Course instructor Fall 2013-present
  Advanced Cell Biology 146:470/ Molecular biology of cells 16-148:514 Module I (4 lectures/year)

undergraduate + graduate students
- Course instructor Fall 2008-2013
  Advanced Neurobiology I 146:445/Neurobiology 710:555 Module VI (7 lectures/year) undergraduate + graduate students
- Course instructor Spring 2009-present
  Neural Injury and Repair 16:963:632 (1 lecture every two years), Rutgers/UMDNJ graduate students
- Course instructor Spring 2009-2011
  Advanced Cell Biology 16:695:601 (2 lectures/year) Rutgers/UMDNJ graduate students
- Course instructor Spring 2010, Seminars in Advanced Cell Biology (1 class) Rutgers/UMDNJ graduate level course
- Laboratory component of 'Introduction to Scientific Research', Spring 21012 Undergraduate level course # 01:556:130
- Course instructor Spring 2013
  Advanced Studies in Neurobiology 16:710:606 (4 classes) Rutgers/UMDNJ graduate students

Training grants, programs and centers, Rutgers/UMDNJ (2007-present)
- Member, Aresty Research Assistant (RA) Program, 2009-2010.
- Member of the Autism Center at UMDNJ-Robert Wood Johnson Medical School/New Jersey Medical School, Children's Specialized Hospital and Rutgers University (2010-present).
- Participant of the Brain Health Institute Symposia (2011 and 2012)
- Mentor, Summer Undergraduate Research Program (SURP) 2011.
- Member of the Human Genetic Institute of New Jersey, April 2012-present
- Participant as a panel discussant in the Scientific Meeting of the Basic and Clinical Research Grantees, Governor's Council for Medical Research and Treatment of Autism, March 201
- Invited Participation at the Translational Research in Autism Conference of the NJ Governor's Council for Medical Research and Treatment of Autism, April 2014.
- Faculty Mentor, NIH BEST (Broadening Experiences in Scientific Training) grant application (Millonig J and Yarmush M, Directors), March 2014.

ADMINISTRATIVE SERVICE ACTIVITES

Committee Service at Baylor College of Medicine

2004-2005	Center for Comparative Medicine, the Feigin Center space committee
2004-2007	Student Affairs committee
2004-2007	International Activities Committee
2004-2007	Faculty Research and Fellowship Support Committee
2004-2005	Student Promotion and Academic Achievement committee
2004-2007	Institutional Safety and Security committee

Committee Service at Rutgers

- 2008-present, Department of Cell Biology and Neuroscience, Curriculum and Assessment Committee (CAC)
- 2008-present, Department of Cell Biology and Neuroscience, Faculty Search Committee
- 2010, Member of the Biomedical Research Advisory Committee (BRAC)
- 2009- 2011, Coordinator of the Data-in–the raw departmental faculty presentation series
- 2010-present, Member of the UMDNJ-RWJMS-GSBS MD/PhD Admissions Committee
- 2010-2011 and 2011-2012 Member of the Faculty Search Committee, Department of Cell Biology and Neuroscience
- 2012-present, Member of the Executive Committee, Department of Cell Biology and Neuroscience
- 2012-present, Member of the Qualifying Examination Committee for the Molecular Biosciences graduate program
- 2013-present, Member of the advisory committee for 4 faculty members reappointment and promotion, Rutgers and the RWJMS
- 2013-present, Member of the Faculty Interview team for the Molecular Biosciences graduate program
- 2013-present, Faculty Participant in the undergraduate CBN major convocation, Rutgers

OTHER

Educational activities:

- Panelist for Career Exploration Day, an initiative of the Bio-1 and the Douglass Project for Rutgers women in Math, Science and Engineering, November 21, 2009. The goal of this program is to make 11th and 12th grade girls aware of different careers paths available to them in biological sciences.
- Participant in the Bunting-Cobb Faculty Dinner Night organized by the Douglass Project for Rutgers women in Math, Science and Engineering, April 13, 2011. The goal of this program is to provide an opportunity for female undergraduate students interested in science to meet and network with women faculty.
- Participant in the first New York Women's Luncheon: "Women breaking the silence about mental illness" organized by the Brain & Behavior Research Foundation, November 13, 2013.

Press releases and lay media citations:

- Rutgers Research Tackles Childhood Epilepsy. Rutgers Media Relations Office, June 10, 2009. Related to the publication of article by Ljungberg et al, *Dis Mod Mech* 2009
- Featured on article in *Psychiatric News* December 19, 2003 vol. 38 no. 24 15-17.
- Featured on second page of The Star-Ledger, April 21, 1995.