CURRICULUM VITAE

ROBERT CHARLES MALENKA, M.D., Ph.D.

Place of Birth Boston, Massachusetts

Education

1973-1978	Harvard College, A.B., Summa cum laude
1978-1983	Stanford University School of Medicine Program in Neuroscience, Ph.D.
1978-1983	Stanford University School of Medicine, M.D.

Positions Held

2013-present	Deputy Director, Stanford Neurosciences Institute Associate Chair, Dept. of Psychiatry and Behavioral Sciences
2008-2013	co-Director, Stanford Institute for Neuro-Innovation and Translational Neurosciences Associate Chair, Dept. of Psychiatry and Behavioral Sciences
1999-present	Pritzker Professor of Psychiatry & Behavioral Sciences Director, Nancy Friend Pritzker Laboratory Stanford University School of Medicine
1997-1999	Professor of Psychiatry & Physiology Director, Center for the Neurobiology of Addiction Associate Director, Center for Neurobiology and Psychiatry University of California, San Francisco
1998	Visiting Professor, Ecole Superieure de Physique et Chimie Industrielles de la Ville de Paris, Paris, France
1989-1997	Assistant-Associate Professor of Psychiatry & Physiology University of California, San Francisco
1986-1989	Resident, Department of Psychiatry Stanford University School of Medicine
1984-1986	Postdoctoral Fellow, Departments of Pharmacology & Physiology (with Roger Nicoll, M.D.) University of California, San Francisco
1983-1984	Intern, Department of Psychiatry Stanford University School of Medicine

Honors and Fellowships

John Harvard Scholarship - 1974-1975
Detur Book Prize - 1976
Mellon Summer Research Program in Psychiatry Fellowship - 1977
Phi Beta Kappa - 1978
Epilepsy Foundation of America Medical Student Fellowship - 1980
Grass Fellowship to Cold Spring Harbor Laboratory - 1982
N.I.H. National Research Service Award - 1984-1986
American Psychiatric Association Resident Research Award - 1987
American College of Neuropsychopharmacology Travel Award – 1988
Klingenstein Fellowship Award in the Neurosciences - 1989-1992

Honors and Fellowships (cont.)

Alfred P. Sloan Research Fellow - 1990-1992
NARSAD Young Investigator Award - 1990-1994
McKnight Scholars Award in Neuroscience - 1990-1993
N.I.M.H. Research Scientist Award - 1991-1996
Society for Neuroscience Young Investigator Award - 1993
N.I.M.H. Independent Scientist Award - 1996-2001
McKnight Investigator Award in Neuroscience - 1997-2000
Stanford Medical Alumni Distinguished Alumni Award - 1998
American College of Neuropsychopharmacology Daniel H. Efron Award – 1998
Associate of the Neurosciences Research Program - 1999-2006
Dargut and Milena Kemali Foundation International Prize in Neuroscience – 2000
Collegium Internationale Neuropsychopharmacologicum-Lilly Basic Neuroscience Research Award - 2002
Member, National Academy of Medicine – 2004
Fellow, American Academy of Arts and Sciences - 2005
Perl-University of North Carolina Neuroscience Prize – 2006
NARSAD Distinguished Investigator - 2007
Fellow, American Association for the Advancement of Science – 2009
Fellow, American College of Neuropsychopharmacology - 2009
NARSAD Goldman-Rakic Prize for Outstanding Cognitive Neuroscience Research - 2010
Pasarow Foundation Award for Extraordinary Accomplishment in Medical Research: Neuropsychiatry – 2011
Member, National Academy of Sciences - 2011
Julius Axelrod Mentorship Award, American College of Neuropsychopharmacology – 2011
Society for Neuroscience Julius Axelrod Prize – 2016
American Psychiatric Association Research Mentorship Award - 2017

Honorary Lectures

Special Lecture, Society for Neuroscience Annual Meeting, Miami, FL - 1999
Wendy and Stanley Marsh Endowed Lecture in Pharmacology and Neurochemistry of Addiction – 2002
Herbert Jasper Endowed Lecture, Montreal Neurological Institute - 2002
Australian Neuroscience Society, ANS Overseas Lecturer, Adelaide, Australia – 2003
Chancellor's Award Lecture in Neuroscience, LSU Health Sciences Center, New Orleans, LA – 2004
John Flynn Memorial Lecture, Dept. of Psychiatry, Yale University School of Medicine – 2005
Keynote Lecture, Gordon Research Conference, Excitatory Amino Acids & Brain Function, NH – 2005
Keynote Lecture, Channels, Receptors & Synapses Meeting, Cold Spring Harbor, NY – 2006
Special Lecture, Society for Neuroscience Annual Meeting, Atlanta, GA – 2006
Plenary Lecture, International Congress on Schizophrenia Research, Colorado Springs, CO - 2007
Bernard Agranoff Lectureship in Neuroscience, University of Michigan, Ann Arbor, MI - 2007
Keynote Lecture, Dana and Betty Fisher Retreat of the Picower Institute, M.I.T., Falmouth, MA – 2008
Plenary Lecture, Japan Neuroscience Society Annual Meeting, Tokyo, Japan – 2008
Keynote Lecture, Brain Research Foundation 10th Annual Neuroscience Day, Chicago, IL – 2008
Presidential Lecture, Society of Biological Psychiatry, Vancouver, Canada – 2009
Plenary Lecture, University of Cambridge Neuroscience Symposium, Cambridge, UK – 2010
University Lecture, University Texas Southwestern Medical Center, Dallas, TX – 2011
Goldman-Rakic NARSAD Distinguished Lecture, Yale University, New Haven, CT – 2011
Keynote Lecture, Grand Opening Virginia Tech Carilion School of Medicine and Research Institute - 2011
Keynote Lecture, Ernest Gallo Clinic & Research Center Retreat, Santa Cruz, CA - 2011
Keynote Lecture, ApoE, Alzheimer's and Lipoprotein Biology, Keystone Symposium, CO – 2012
Hille Lecture, Dept. of Physiology, University of Washington, Seattle, WA - 2012
Keynote Lecture, Gordon Research Conference, Molecular & Cellular Neurobiology, Hong Kong – 2012
James E. Beall II Memorial Lecture, University of Texas Medical Center, Galveston, TX – 2012
Plenary Speaker, Molecular Psychiatry Association Meeting, San Francisco, CA – 2013
Margaret Bidwell Memorial Lecture, Dept. of Brain & Cognitive Sciences, MIT, Cambridge, MA – 2014
Keynote Lecture, Institut Pasteur, Departement Neuroscience, Chateau de Maffliers, France - 2015
Keynote Speaker, 5th European Synapse Meeting, Bristol, United Kingdom - 2015
Jack Diamond Memorial Lecture, McMaster University, Hamilton, Canada – 2016
Keynote Lecture, 18th International Neuroscience Winter Conference, Solden, Austria - 2016

Licenses

1984-present Medical License, California (G53810)

Professional Affiliations

1979 - Present	American Association for the Advancement of Science, Fellow
1980 - Present	Society for Neuroscience
1998 - Present	American College of Neuropsychopharmacology, Fellow
2000 – Present	Dana Alliance for Brain Initiatives

Publications (as of Sept, 2017: Google scholar h-index=135; total citations=72319)

1. Hobson, J.A., Spagna, T. and Malenka, R. Ethology of sleep studied with time-lapse photography: Postural immobility and sleep-cycle phase in humans. **Science** 201: 1251-1253, 1978.

2. Kocsis, J.D., Malenka, R.C. and Waxman, S.G. Effects of 4-aminopyridine on the frequency-following properties of the parallel fibers of the cerebellar cortex. **Brain Res.** 195: 511-516, 1980.

3. Kocsis, J.D., Malenka, R.C. and Waxman, S.G. Enhanced parallel fiber frequency-following after reduction of postsynaptic activity. **Brain Res.** 202: 321-331, 1981.

4. Malenka, R.C., Kocsis, J.D., Ransom, B.R. and Waxman, S.G. Modulation of parallel fiber excitability by postsynaptically mediated changes in extracellular potassium. **Science** 214: 339-341, 1981.

5. Malenka, R.C. and Kocsis, J.D. Effects of GABA on stimulus-evoked changes in $[K^+]_o$ and parallel fiber excitability. **J. Neurophysiol.** 48: 608-621, 1982.

6. Malenka, R.C., Angel, R.W., Hampton, B. and Berger, P.A. Impaired central error-correcting behavior in schizophrenia. **Arch. Gen. Psychiat.** 39: 101-107, 1982.

7. Angel, R.W. and Malenka, R.C. Velocity-dependent suppression of cutaneous sensitivity during movement. **Exp. Neurol.** 77: 266-274, 1982.

8. Malenka, R.C., Kocsis, J.D. and Waxman, S.G. The supernormal period of the cerebellar parallel fibers: Effects of $[Ca^{2+}]_o$ and $[K^+]_o$. **Pflugers Archiv. (Eur. J. Physiol.)** 397: 176-183, 1983.

9. Kocsis, J.D., Malenka, R.C. and Waxman, S.G. Effects of extracellular potassium on the excitability of the parallel fibers of the rat cerebellar cortex. **J. Physiol.** 334: 225-244, 1983.

10. Malenka, R.C., Angel, R.W., Thiemann, S., Weitz, C.W. and Berger, P.A. Central error-correcting behavior in schizophrenia and depression. **Biol. Psychiat.** 21: 263-273, 1986.

11. Malenka, R.C., Madison, D.V., Andrade, R. and Nicoll, R.A. Phorbol esters mimic some cholinergic actions in hippocampal pyramidal neurons. **J. Neurosci.** 6: 475-480, 1986.

12. Malenka, R.C., Madison, D.V. and Nicoll, R.A. Potentiation of synaptic transmission in the hippocampus by phorbol esters. **Nature** 321: 175-177, 1986.

13. Malenka, R.C. and Nicoll, R.A. Dopamine decreases the calcium-activated afterhyperpolarization in hippocampal pyramidal cells. **Brain Res.** 379: 210-215, 1986.

14. Madison, D.V., Malenka, R.C. and Nicoll, R.A. Phorbol esters block a voltage-sensitive chloride current in hippocampal pyramidal cells. **Nature** 321: 695-697, 1986.

15. Andrade, R., Malenka, R.C. and Nicoll, R.A. A G-protein couples serotonin and GABAB receptors to the same potassium channels in hippocampus. **Science** 234: 1261-1265, 1986.

Publications (cont.)

16. Malenka, R.C., Ayoub, G.S. and Nicoll, R.A. Phorbol esters enhance transmitter release in rat hippocampal slices. **Brain Res.** 403: 198-204, 1987.

17. Malenka, R.C. The clinician-researcher in psychiatry. (Letter.) **Amer. J. Psychiat.** 144: 535-536, 1987.

18. Nicoll, R.A., Kauer, J.A. and Malenka, R.C. The current excitement in LTP. (Review.) **Neuron** 1: 97-103, 1988.

19. Kauer, J.A., Malenka, R.C. and Nicoll, R.A. NMDA application potentiates synaptic transmission in the hippocampus. **Nature** 334: 250-252, 1988.

20. Malenka, R.C., Kauer, J.A., Zucker, R.S. and Nicoll, R.A. Postsynaptic calcium is sufficient for potentiation of hippocampal synaptic transmission. **Science** 242: 81-84, 1988.

21. Malenka, R.C. and Kocsis, J.D. Presynaptic actions of carbachol and adenosine on corticostriatal synaptic transmission studied in vitro. **J. Neurosci.** 8: 3750-3756, 1988.

22. Connors, B.W., Malenka, R.C. and Silva, L.R. Two inhibitory postsynaptic potentials and $GABA_A$ and $GABA_B$ receptor-mediated responses in neocortex of rat and cat. **J. Physiol.** 406: 443-468, 1988.

23. Kauer, J.A., Malenka, R.C. and Nicoll, R.A. A persistent postsynaptic modification mediates long-term potentiation in the hippocampus. **Neuron** 1: 911-917, 1988.

24. Malenka, R.C., Kauer, J.A., Perkel, D.J., Mauk, M.D., Kelly, P.T., Nicoll, R.A. and Waxham, M.N. An essential role for postsynaptic calmodulin and protein kinase activity in long-term potentiation. **Nature** 340: 554-557, 1989.

25. Malenka, R.C., Kauer, J.A., Perkel, D. and Nicoll, R.A. The impact of postsynaptic calcium on synaptic transmission - its role in long-term potentiation. **Tr. Neurosci.** 12: 444-450, 1989.

26. Nicoll, R.A., Malenka, R.C. and Kauer, J.A. Functional comparison of neurotransmitter receptor subtypes in the mammalian CNS. **Physiological Reviews** 70: 513-565, 1990.

27. Malenka, R.C. and Nicoll, R.A. Intracellular signals and LTP. **Sem. Neurosciences** 2: 335-343, 1990.

28. Madison, V.D., Malenka, R.C. and Nicoll, R.A. Mechanisms underlying long-term potentiation of synaptic transmission. **Ann. Rev. Neurosci.** 14: 379-397, 1991.

29. Malenka, R.C. Postsynaptic factors control the duration of synaptic enhancement in area CA1 of the hippocampus. **Neuron** 6: 53-60, 1991.

30. Baskys, A. and Malenka, R.C. Trans-ACPD depresses synaptic transmission in the hippocampus. **Eur. J. Pharmacol.** 193: 131-132, 1991.

31. Baskys, A. and Malenka, R.C. Agonists at metabotropic glutamate receptors presynaptically inhibit EPSCs in neonatal rat hippocampus. **J. Physiol.** 444: 687-701, 1991.

32. Colino, A., Huang, Y.-Y. and Malenka, R.C. Characterization of the integration time for the stabilization of long-term potentiation in area CA1 of the hippocampus. **J. Neurosci.** 12: 180-187, 1992.

33. Huang, Y.-Y., Colino, A., Selig, D.K. and Malenka, R.C. The influence of prior synaptic activity on the induction of long-term potentiation. **Science** 255: 730-733, 1992.

34. Malenka, R.C. The role of postsynaptic calcium in the induction of long-term potentiation. **Molec. Neurobiol.** 5: 289-295, 1992.

35. Malenka, R.C., Lancaster, B. and Zucker, R.S. Temporal limits on the rise in calcium required for the induction of long-term potentiation. **Neuron** 9: 121-128, 1992.

Publications (cont.)

36. Mulkey, R.M. and Malenka, R.C. Mechanisms underlying induction of homosynaptic long-term depression in area CA1 of hippocampus. **Neuron** 9: 967-975, 1992.

37. Huang, Y.-Y. and Malenka, R.C. Examination of TEA-induced synaptic enhancement in area CA1 of the hippocampus: the role of voltage-dependent Ca^{2+} channels in the induction of LTP. **J. Neurosci.** 13: 568-576, 1993.

38. Colino, A. and Malenka, R.C. Mechanisms underlying induction of LTP in rat medial and lateral perforant paths in vitro. **J. Neurophysiol.** 69: 1150-1159, 1993.

39. Waxham, N., Malenka, R.C., Kelly, P.T. and Mauk, M. Calcium/calmodulin dependent protein kinase II regulates hippocampal synaptic transmission. **Brain Res.** 609: 1-8, 1993.

40. Malenka, R.C. Long-term depression: Not so depressing after all. **Proc. Natl. Acad. Sci. U.S.A.** 90: 3121-3123, 1993.

41. Mulkey, R.M., Herron, C.E. and Malenka, R.C. An essential role for protein phosphatases in hippocampal long-term depression. **Science** 261: 1051-1055, 1993.

42. Malenka, R.C. and Nicoll, R.A. NMDA receptor-dependent synaptic plasticity: multiple forms and mechanisms. **Tr. Neurosci.** 16: 521-527, 1993.

43. Rosahl, T.W., Geppert, M., Spillane, D., Herz, J., Hammer, R.E., Malenka, R.C. and Sudhof, T.C. Short term synaptic plasticity is altered in mice lacking synapsin I. **Cell** 75: 661-670, 1993.

44. Kombian, S.B. and Malenka R.C. Simultaneous LTP of non-NMDA and LTD of NMDA receptor-mediatd responses in the nucleus accumbens. **Nature** 368: 242-246, 1994.

45. Mulkey, R.M., Endo, S., Shenolikar, S. and Malenka, R.C. Involvement of a calcineurin/inhibitor-1 phosphatase cascade in hippocampal long-term depression. **Nature** 369: 486-488, 1994.

46. Cummings, J.A., Nicola, S.M. and Malenka, R.C. Induction of LTP and LTD in the presence of a nitric oxide synthase inhibitor in rat hippocampal slices. **Neurosci. Lett.** 176: 110-114, 1994.

47. Bear, M.F. and Malenka, R.C. Synaptic plasticity: LTP and LTD. **Curr. Opin. Neurobiol.** 4: 389-399, 1994.

48. Malenka, R.C. Synaptic plasticity in the hippocampus: LTP and LTD. **Cell** 78: 535-538, 1994.

49. Herron, C.E. and Malenka, R.C. Activity dependent enhancement of synaptic transmission in hippocampal slices treated with the phosphatase inhibitor calyculin A. **J. Neurosci.** 14: 6013-6020, 1994.

50. Malenka, R.C. Mucking up movements. (News and Views) **Nature** 372: 218-219, 1994.

51. Malenka, R.C. LTP and LTD: Dynamic and interactive processes of synaptic plasticity. **The Neuroscientist** 1: 35-42, 1995.

52. Crair, M.C. and Malenka, R.C. A critical period for long-term potentiation at thalamocortical synapses. **Nature** 375: 325-328, 1995.

53. Rosahl, T.W., Spillane, D., Missler, M., Herz, J., Selig, D., Wolff, J.R., Hammer, R.E., Malenka, R.C. and Sudhof, T.C. Essential functions of synapsins I and II in synaptic vesicle regulation. **Nature** 375: 488-493, 1995.

54. Selig, D.K., Hjelmstad, G.O., Herron, C., Nicoll, R.A. and Malenka, R.C. Independent mechanisms for long-term depression of AMPA and NMDA responses. **Neuron** 15: 417-426, 1995.

Publications (cont.)

55. Isaac, J.T.R., Nicoll, R.A. and Malenka, R.C. Evidence for silent synapses: Implications for the expression of LTP **Neuron** 15: 427-434, 1995.

56. Nicoll, R.A. and Malenka, R.C. Contrasting properties of two forms of LTP in the hippocampus. **Nature** 377: 115-118, 1995.

57. Selig, D.K., Lee, H.-Y., Bear, M.F. and Malenka, R.C. Reexamination of the effects of MCPG on hippocampal LTP, LTD, and depotentiation. **J. Neurophysiol.** 74: 1075-1082, 1995.

58. Spillane, D., Rosahl, T.W., Sudhof, T.C. and Malenka, R.C. Long-term potentiation in mice lacking synapsins. **Neuropharmacology** 34: 1573-1580, 1995.

59. Lledo, P.M., Hjelmstad, G., Mukherji, S., Soderling, T.R., Malenka, R.C. and Nicoll, R.A. CaM-kinase II and LTP enhance synaptic transmission by the same mechanism. **Proc. Natl. Acad. Sci. U.S.A**. 92: 11175-11179, 1995.

60. Nicola, S.M., Kombian, S.B. and Malenka R.C. Psychostimulants depress excitatory synaptic transmission in the nucleus accumbens via presynaptic D1-like dopamine receptors. **J. Neurosci.** 16: 1591-1604, 1996.

61. Oliet, S.H.R., Malenka, R.C. and Nicoll, R.A. Bidirectional control of quantal size by synaptic activity in the hippocampus. **Science** 271: 1294-1297, 1996.

62. Scanziani, M., Malenka, R.C. and Nicoll, R.A. Role of intercellular interactions in heterosynaptic long-term depression. **Nature** 380: 446-450, 1996.

63. Salin, P.A., Malenka, R.C. and Nicoll, R.A. Cyclic AMP mediates a presynaptic form of LTP at cerebellar parallel fiber synapses. **Neuron** 16: 797-803, 1996.

64. Cummings, J.A., Mulkey, R.M., Nicoll, R.A. and Malenka, R.C. Calcium signaling requirements for long-term depression in the hippocampus. **Neuron** 16: 825-833, 1996.

65. Tong, G., Malenka, R.C. and Nicoll, R.A. Long-term potentiation in cultures of single hippocampal granule cells: a presynaptic form of plasticity. **Neuron** 16: 1147-1157, 1996.

66. Isaac, J.T.R., Hjelmstad, G.O., Nicoll, R.A. and Malenka, R.C. Long-term potentiation at single fiber inputs to hippocampal CA1 pyramidal cells. **Proc. Natl. Acad. Sci. USA** 93: 8710-8715. 1996.

67. Selig, D.K., Segal, M.R., Liao, D., Malenka, R.C., Malinow, R., Nicoll, R.A. and Lisman, J.A. Examination of the role of cGMP in long-term potentiation in the CA1 region of the hippocampus. **Learning and Memory** 3: 42-48, 1996.

68. Salin, P.A., Scanziani, M., Malenka, R.C. and Nicoll R.A. Distinct short-term plasticity at two excitatory synapses in the hippocampus. **Proc. Natl. Acad. Sci. USA** 93: 13304-13309, 1996.

69. Scanziani, M., Salin, P, Malenka, R.C. and Nicoll, R.A. Use-dependent increases in glutamate concentration activate presynaptic metabotropic glutamate receptors. **Nature** 385: 630-634, 1997.

70. Isaac, J.T.R., Nicoll, R.A. and Malenka, R.C. Silent synapses during development of thalamocortical inputs. **Neuron** 18: 269-280, 1997.

71. Castillo, P.E., Malenka, R.C. and Nicoll, R.A. Kainate receptors mediate a slow post-synaptic current in hippocampal CA3 neurons. **Nature** 388: 182-186, 1997.

72. Lisman, J., Malenka, R.C., Nicoll, R.A. and Malinow, R. Learning mechanisms: the case for CaM-KII. **Science** (Perspective) 276: 2001-2002, 1997.

Publications (cont.)

73. Oliet, S.H.R., Malenka, R.C. and Nicoll, R.A. Two distinct forms of long-term depression coexist in CA1 hippocampal pyramidal cells. **Neuron** 18: 969-982, 1997.

74. Nicola, S.M. and Malenka, R.C. Dopamine depresses excitatory and inhibitory synaptic transmission via distinct mechanisms in the nucleus accumbens. **J. Neurosci**. 17: 5697-5710, 1997.

75. Nicoll, R.A. and Malenka, R.C. Long-distance long-term depression. **Nature** (News and Views) 388: 427-428, 1997.

76. Castillo, P.E., Janz, R., Sudhof, T.C., Tzounopoulos, T., Malenka, R.C. and Nicoll, R.A. The synaptic vesicle protein Rab3A is essential for mossy fibre long-term potentiation in the hippocampus. **Nature** 388: 590-593, 1997.

77. Luscher, C., Jan, L.Y., Stoffel, M., Malenka, R.C. and Nicoll, R.A. G-protein inwardly rectifying K+ channels (GIRKs) mediate postsynaptic, but not presynaptic transmitter actions in hippocampal neurons. **Neuron** 19: 687-695, 1997.

78. Malenka, R.C. and Nicoll, R.A. Silent synapses speak up. **Neuron** (review) 19: 473-476, 1997.

79. Malenka, R.C. and Nicoll, R.A. Never fear, LTP is hear. **Nature** (News and Views) 390: 552-553, 1997.

80. Hjelmstad, G.O., Nicoll, R.A. and Malenka, R.C. Synaptic refractory period provides a measure of probability of release in the hippocampus. **Neuron** 19: 1309-1318, 1997.

81. Lledo, P.-M., Zhang, S., Sudhof, T.C., Malenka, R.C. and Nicoll. R.A. Postsynaptic membrane fusion and long-term potentiation. **Science** 279: 399-403, 1998.

82. Nicola, S.M. and Malenka, R.C. Modulation of synaptic transmission by dopamine and norepinephrine in ventral but not dorsal striatum. **J. Neurophysiol.** 79: 1768-1776, 1998.

83. Hsia, A.Y., Malenka, R.C. and Nicoll, R.A. Development of excitatory circuitry in the hippocampus **J. Neurophysiol.** 79: 2013-2024, 1998.

84. Petersen, C.C.H., Malenka, R.C., Nicoll, R.A. and Hopfield, J.J. All-or-none potentiation at CA3-CA1 synapses. **Proc. Natl. Acad. Sci. U.S.A.** 95: 4732-4737, 1998.

85. Nicoll R.A. and Malenka, R.C. Neuroscience-A tale of two transmitters. **Science** (Perspective) 281: 360-361, 1998.

86. Lissin, D.V., Gomperts, S.N., Carroll, R., Christine, C.W., Kallman, D., Kitamura, M., Hardy, S., Nicoll, R.A., Malenka, R.C. and Von Zastrow, M. Activity differentially regulates the surface expression of synaptic AMPA and NMDA receptors. **Proc. Natl. Acad. Sci. U.S.A.** 95: 7097-7102, 1998.

87. Malenka, R.. C. and Nicoll, R. A. Long-term depression with a flash. **Nature Neuroscience** (News and Views) 1: 89-90, 1998.

88. Luscher C., Malenka, R. C. and Nicoll, R. A. Monitoring glutamate release during LTP with glial transporter currents. **Neuron** 21: 435-441, 1998.

89. Feldman, D.E., Nicoll, R.A., Malenka, R.C. and Isaac J. T. R. Long-term depression at thalamocortical synapses in developing rat somatosensory cortex. **Neuron** 21: 347-357, 1998.

90. Frerking, M., Malenka, R. C. and Nicoll, R. A. Synaptic activation of kainate receptors on hippocampal interneurons. **Nature Neuroscience** 1: 479-486, 1998.

91. Tzounopoulos, T., Janz, R., Sudhof, T. C., Nicoll, R. A. and Malenka, R. C. A role for cAMP in long-term depression at hippocampal mossy fiber synapses. **Neuron** 21: 837-845, 1998.

Publications (cont.)

92. Nicoll, R. A., Oliet, S. H. R. and Malenka, R. C. NMDA receptor-dependent and metabotropic glutamate receptor-dependent forms of long-term depression coexist in CA1 hippocampal pyramidal cells. **Neurobiol. Learn. Mem.** 70: 62-72, 1998.

93. Carroll, R.C, Nicoll, R.A. and Malenka, R.C. Effects of PKA and PKC on miniature excitatory postsynaptic currents in CA1 pyramidal cells. **J. Neurophysiol.** 80: 2797-2800, 1998.

94. Frerking, M., Malenka, R.C. and Nicoll, R.A. Brain-derived neurotrophic factor (BDNF) modulates inhibitory, but not excitatory, transmission in the CA1 region of the hippocampus. **J. Neurophysiol.** 80: 3383-3386, 1998.

95. Gomperts, S.N., Rao, A., Craig, A.M., Malenka, R.C. and Nicoll, R.A. Postsynaptically silent synapses in single neuron cultures. **Neuron** 21: 1443-1451, 1998.

96. Malenka, R.C. and Nicoll, R.A. Is bigger better? (News and Views) **Nature** 396: 414-415, 1998.

97. Selig, D.K., Nicoll, R.A. and Malenka, R.C. Hippocampal long-term potentiation preserves the fidelity of postsynaptic responses to presynaptic bursts. **J. Neurosci.** 19: 1236-1246, 1999.

98. Lissin, D.V., Carroll, R.C., Nicoll, R.A., Malenka, R.C. and Von Zastrow, M. Rapid, activation-induced redistribution of glutamate receptors in cultured hippocampal neurons. **J. Neurosci.** 19: 1263-1272, 1999.

99. Hsia, A.Y., Masliah, E., McConlogue, L., Yu, G.-Q., Tatsuno, G., Hu, K., Kholodenko, D., Malenka, R.C., Nicoll, R.A. and Mucke, L. Plaque-independent disruption of neural circuits in Alzheimer's disease mouse models. **Proc. Natl. Acad. Sci. USA** 96: 3228-3233, 1999.

100. Hjlemstad, G.O., Nicoll, R.A. and Malenka, R.C. Lack of AMPA receptor desensitization during basal synaptic transmission in the hippocampal slice. **J. Neurophysiol** 81: 3096-3099, 1999

101. Carroll, R.C., Lissin, D.V., Von Zastrow, M., Nicoll, R.A. and Malenka, R.C. Rapid redistribution of glutamate receptors contributes to long-term depression in hippocampal cultures. **Nature Neuroscience** 2: 454-460, 1999.

102. Bonci, A. and Malenka, R.C. Properties and plasticity of excitatory synapses on dopaminergic and GABAergic cells in the ventral tegmental area. **J. Neurosci.** 19: 3723-3730, 1999.

103. Nicoll, R.A. and Malenka, R.C. Leaky Synapses. **Neuron** 23: 197-198, 1999

104. Schlueter, O.M., Schnell, E., Verhage, M., Tzonopoulos, T., Nicoll, R.A., Janz, R., Malenka, R.C., Geppert, M. and Sudhof, T. Rabphilin knock-out mice reveal that rabphilin is not required for rab3 function in regulating neurotransmitter release. **J. Neurosci** 19:5834-5846, 1999.

105. Malenka, R.C. and Nicoll, R. Long-Term Potentiation – A Decade of Progress? **Science** 285: 1870-1824, 1999.

106. Carroll, R.C., Beattie, E.C., Xia, H., Luscher, C., Altschuler,Y., Nicoll, R., Malenka, R.C. and von Zastrow, M., Dynamin-dependent endocytosis of ionotropic glutamate receptors **Proc. Natl. Acad. Sci. USA** 96:14112-14117, 1999.

107. Nicoll, R.A. and Malenka, R.C. Expression mechanisms underlying NMDA receptor-dependent long-term potentiation **Annals New York Acad. of Sciences** 868:515-525, 1999.

108. Luscher, C., Xia, H., Beattie, E., Carroll, R., von Zastrow, M., Malenka, R. and Nicoll, R. Role of AMPA receptor cycling in synaptic transmission and plasticity. **Neuron** 24: 1-20, 1999.

109. Isaac, J., Nicoll, R. and Malenka, R. Silent glutamatergic synapses in the mammalian brain. **Can. J. Physiol. Pharmacol.** 77: 735-737, 1999.

Publications (cont.)

110. Gomperts, S., Carroll, R., Malenka., R. and Nicoll, R. Distinct roles for ionotropic and metabotropic glutamate receptors in the maturation of excitatory synapses. **J. Neurosci.** 20 6:2229-2237, 2000.

111. Nicola, S., Surmeier, J. and Malenka, R. Dopaminergic modulation of neuronal excitability in the striatum and nucleus accumbens. **Annu. Rev. Neurosci.** 23:185-215, 2000.

112. Thomas, M., Malenka, R., Bonci, A. Modulation of long-term depression by dopamine in the mesolimbic system. **J. Neurosci.** 20 15:5581-5586, 2000.

113. Luscher, C., Nicoll, R.A., Malenka, R., Muller, D. Synaptic plasticity and dynamic modulation of postsynaptic membrane. **Nature Neuroscience** 3:545-50, 2000.

114. Carroll, R.C. and Malenka, R.C. Delivering the goods to synapses (news and views). **Nature Neuroscience** 3:1064-1066, 2000

115. Beattie, E.C., Carroll, R.C., Yu, X., Morishita, W., Yasuda, H., von Zastrow, M., Malenka, R.C. Regulation of AMPA receptor endocytosis by a signaling mechanism shared with LTD. **Nature Neuroscience** 3: 1291-1300, 2000.

116. Barth, A.L. and Malenka, R.C. NMDAR EPSC kinetics do not regulate the critical period for LTP at thalamocortical synapses. **Nature Neuroscience** 4:235-236, 2001.

117. Carroll, R.C., Beattie, E.C., Von Zastrow, M. and Malenka, R.C. Role of AMPA receptor endocytosis in synaptic plasticity. **Nature Rev. Neurosci.** 2:315-324, 2001

118. Ungless, M.A., Whistler, J.L., Malenka, R.C. and Bonci, A. Single cocaine exposure *in vivo* induces long-term potentiation in dopamine cells. **Nature** 411:583-587, 2001.

119. Hyman, S.E. and Malenka, R.C. Addiction and the brain: the neurobiology of compulsion and its persistence. **Nature Rev. Neurosci.** 2: 695-703, 2001.

120. Thomas, M.J., Beurrier, C., Bonci, A. and Malenka, R.C. Long-term depression in the nucleus accumbens: a neural correlate of behavioral sensitization to cocaine. **Nature Neurosci.** 4: 1217-1223, 2001.

121. Xia, H., Hornby, Z.D. and Malenka R.C. An ER retention signal explains differences in surface expression of NMDA and AMPA receptor subunits. **Neuropharmacol.** 41: 714-723, 2001.

122. Morishita, W., Connor, J.H., Xia, H., Quinlan, E.M., Shenolikar, S. and Malenka R.C. Regulation of synaptic strength by protein phosphatase 1. **Neuron** 32: 1133-1148, 2001.

123. Schoch, S., Castillo, P.E., Jo, T., Mukherjee, K., Geppert, M., Wan, Y., Schmitz, F., Malenka, R.C. and Sudhof, T.C. Rim1α forms a protein scaffold for regulating neurotransmitter release at the active zone. **Nature** 415: 321-326, 2002.

124. Castillo, P.E., Schoch, S., Schmitz, F., Sudhof, T.C. and Malenka, R.C. Rim1α is required for presynaptic long-term potentiation. **Nature** 415: 327-330, 2002.

125. Beattie, E., Stellwagen, D., Morishita, W., Bresnahan, J., Ha, B.K., Von Zastrow, M, Beattie, M.S. and Malenka, R.C. Regulation of synaptic strength by glial TNFα. **Science** 295: 2282-2285, 2002.

126. Braithwaite, S.P., Xia, H., and Malenka, R.C. Differential roles for NSF and GRIP/ABP in AMPA receptor cycling. **Proc. Natl. Acad. Sci. U.S.A.** 99: 7096-7101, 2002.

127. Malinow, R. and Malenka R.C. AMPA receptor trafficking and synaptic plasticity. **Annu. Rev. Neurosci.** 25: 103-126, 2002.

128. Beurrier, C. and Malenka, R.C. Enhanced inhibition of synaptic transmission by dopamine in the nucleus accumbens during behavioral sensitization to cocaine. **J. Neurosci.** 22: 5817-5822, 2002.

Publications (cont.)

129. Malenka, R.C. NIH workshop report: taming the brain's complexity. **Neuron** 36: 29-30, 2002.

130. Xia, H., Von Zastrow, M. and Malenka R.C. A novel anterograde trafficking signal present in the N terminal extracellular domain of ionotropic glutamate receptors. **J. Biol. Chem.** 277: 47765-47769, 2002.

131. Yasuda, H., Barth, A.L., Stellwagen, D. and Malenka, R.C. A developmental switch in the signaling cascades for LTP induction. **Nature Neurosci.** 6: 15-16, 2003.

132. Saal, D., Dong, Y., Bonci, A. and Malenka, R.C. Drugs of abuse and stress trigger a common synaptic adaptation in dopamine neurons. **Neuron** 37: 577-582, 2003.

133. Ho, A., Morishita, W., Hammer, R.E., Malenka, R.C. and Sudhof, T.C. A role for Mints in transmitter release: Mint 1 knockout mice exhibit impaired GABAergic synaptic transmission. **Proc. Natl. Acad. Sci. USA** 100: 1409-1414, 2003.

134. Thomas, M.J. and Malenka, R.C. Synaptic plasticity in the mesolimbic dopamine system. **Philos. Trans. Royal Soc. London B, Biol. Sci.** 29: 815-819, 2003.

135. Xiang, Y. and Malenka, R.C. β-catenin is critical for dendritic morphogenesis. **Nature Neurosci.** 6: 1169-1177, 2003.

136. Malenka, R.C. The long-term potential of LTP. **Nature Rev. Neurosci.** 4: 923-926, 2003.

137. Deisseroth, K., Singla, S., Toda, H., Monje, M., Palmer, T.D. and Malenka, R.C. Excitation-neurogenesis coupling in adult neural stem/progenitor cells. **Neuron** 42: 535-552, 2004.

138. Ju, W., Morishita, W., Tsui, J., Gaietta, G., Deerinck,, T., Adams, S., Garner, C.C., Tsien, R.Y., Ellisman, M., and Malenka, R.C. Activity-dependent regulation of dendritic synthesis and trafficking of AMPA receptors. **Nature Neurosci**. 7: 244-253, 2004.

139. Nestler, E.J. and Malenka, R.C. The addicted brain. **Scientific American** March, 2004.

140. Calakos, N., Schoch, S., Sudhof, T.C. and Malenka, R.C. Multiple roles for the active zone protein RIM1α in late stages of neurotransmitter release. **Neuron** 42: 889-896, 2004.

141. Yu, X. and Malenka, R.C. Multiple functions for the cadherin/catenin complex during neuronal development. **Neuropharmacol.** 47: 779-786, 2004.

142. Borgland, S.L., Malenka, R.C., and Bonci, A. Acute and chronic cocaine-induced potentiation of synaptic strength in the ventral tegmental area: electrophysiological and behavioral correlates in individual rats. **J. Neurosci**. 24: 7482-7490, 2004.

143. Kleschevnikov, A.M., Belichenko, P.V., Villar, A.J., Epstein, C.J. Malenka R.C., and Mobley, W.C. Hippocampal long-term potentiation suppressed by increased inhibition in the Ts65Dn mouse, a genetic model of Down Syndrome. **J. Neurosci**. 24: 8153-8160, 2004.

144. Dong, Y., Saal, D., Thomas, M., Faust, R., Bonci, A., Robinson, T., and Malenka, R.C. Cocaine-induced potentiation of synaptic strength in dopamine neurons: behavioral correlates in GluRA(-/-) mice. **Proc. Natl. Acad. Sci. USA** 101: 14282-14287, 2004.

145. Malenka, R.C. and Bear, M.F. LTP and LTD: an embarrassment of riches. **Neuron** 44: 5-21, 2004.

146. Dong, Y., Nasif, F.J., Tsui, J.J., Ju, W.Y., Cooper, D.C., Hu, X., Malenka, R.C. & White, F.J. Cocaine-induced plasticity in prefrontal cortex pyramidal neurons: adaptations in potassium currents. **J. Neurosci.** 25: 936-940, 2005.

147. Marie, H., Morishita, W., Yu, X., Calakos, N. & Malenka, R.C. Generation of silent synapses by acute *in vivo* expression of CaMKIV and CREB. **Neuron** 45: 741-752, 2005.

Publications (cont.)

148. Stellwagen, D., Beattie, E.C., Seo, J.-Y. & Malenka, R.C. Differential regulation of AMPA receptor and GABA receptor trafficking by TNFα. **J. Neurosci**. 25: 3219-3228, 2005.

149. Morishita, W. Marie, H. and Malenka, R.C. Distinct triggering and expression mechanisms underlie LTD of AMPA and NMDA synaptic responses. **Nature Neurosci.** 8: 1043-1050, 2005

150. Kreitzer, A. and Malenka, R.C. Dopamine modulation of state-dependent endocannabinoid release and long-term depression in the striatum. **J. Neurosci**. 25: 10537-10545, 2005.

151. Deisseroth, K. & Malenka, R.C. GABA excitation in the adult brain: a mechanism for excitation-neurogenesis coupling. **Neuron** 47: 775-777, 2005.

152. Yee, B.K., Keist, R., von Boehmer, L., Studer, R., Benke, D., Hagenbuch, N., Dong, Y., Malenka, R.C., Fritschy, J.M., Bluethmann, H., Feldon, J., Mohler, H. & Rudolph, U. A schizophrenia-related sensorimotor deficit links alpha 3-containing GABAA receptors to a dopamine hyperfunction. **Proc. Natl. Acad. Sci. USA** 102: 17154-17159, 2005.

153. Regalado, M. P., Terry-Lorenzo, R.T., Waites, C.L., Garner, C.G. & Malenka, R.C. Transsynaptic signaling by postsynaptic synapse associated protein 97. **J. Neurosci.** 26: 2343-2357, 2006.

154. Dong, Y., Green, T., Saal, D., Marie, H., Neve, R., Nestler, E.J. & Malenka, R.C. CREB modulates excitability of nucleus accumbens neurons. **Nature Neurosci.** 9: 475-477, 2006.

155. Stellwagen, D. & Malenka, R.C. Synaptic scaling mediated by glial TNF-α. **Nature** 440: 1054-1059, 2006.

156. Tsui, J. & Malenka, R.C. Substrate localization creates specificity in calcium/calmodulin-dependent protein kinase II signaling at synapses. **J. Biol. Chem**. 281: 13794-13804, 2006.

157. Schluter, O, Xu, W. & Malenka, R.C. Alternative N-terminal domains of PSD-95 and SAP97 govern activity-dependent regulation of synaptic AMPA receptor function. **Neuron** 51: 99-111, 2006.

158. Hyman, S.E., Malenka, R.C. & Nestler, E.J. Neural mechanisms of addiction: the role of reward-related learning and memory. **Annu. Rev. Neurosci**. 29: 565-598, 2006.

159. Kauer, J.A. & Malenka, R.C. LTP: AMPA receptors trading places. **Nature Neurosci**. 9: 593-594, 2006.

160. Bjartmar, L., Huberman, A.D., Ullian, E.M., Renteria, R.C., Liu, X., Xu, W., Prezioso, J., Susman, M.W., Stellwagen, D., Stokes, C.C., Cho, R., Worley, P., Malenka, R.C., Ball, S., Peachey, N.S., Copenhagen, D., Chapman, B., Nakamoto, M., Barres, B.A., & Perin, M.S. Neuronal pentraxins mediate synaptic refinement in the developing visual system**.** **J. Neurosci.** 26: 6269-6281, 2006.

161. Ho, A., Morishita, W., Atasoy, D., Liu, X., Tabuchi, K., Hammer, R.E., Malenka, R.C. & Sudhof, T.C. Genetic analysis of Mint/X11 proteins: essential presynaptic functions of a neuronal adaptor protein family. **J. Neurosci.** 26: 13089-13101, 2006.

162. Morishita, W., Lu, W., Smith, G.B., Nicoll, R.A., Bear, M.F. & Malenka, R.C. Activation of NR2B-containing NMDA receptors is not required for NMDA receptor-dependent long-term depression. **Neuropharmacol**. 52:71-76, 2007.

163. Guzman, R., Uchida, N., Bliss, T.M., He, D., Christopherson, K.K., Stellwagen, D., Capela, A., Greve, J., Malenka, R.C., Moseley, M.E., Palmer, T.D., & Steinberg, G.K. Long-term monitoring of transplanted human neural stem cells in developmental and pathological contexts with MRI. **Proc. Natl. Acad. Sci. USA.** 104:10211-10216, 2007.

164. Fernandez, F., Morishita, W., Zuniga, E., Nguyen, J., Blank, M., Malenka, R.C., & Garner CC. Pharmacotherapy for cognitive impairment in a mouse model of Down syndrome. **Nature Neurosci.** 10:411-413, 2007.

165. Kreitzer, A.C. & Malenka, R.C. Endocannabinoid-mediated rescue of striatal LTD and motor deficits in Parkinson's disease models. **Nature** 445: 643-647, 2007.

Publications (cont.)

166. Singla, S., Kreitzer, A.C. & Malenka, R.C. Mechanisms for synapse specificity during striatal long-term depression**. J. Neurosci.** 27: 5260-5264, 2007.

167. Kauer, J.A. & Malenka, R.C. Synaptic plasticity and addiction. **Nature Rev. Neurosci.** 8: 844-858, 2007.

168. Citri, A. & Malenka, R.C. Synaptic plasticity: multiple forms, functions, and mechanisms. **Neuropscyhopharmacol.** 33: 18-41, 2008.

169. Morishita, W. & Malenka, R.C. Mechanisms underlying de-depression of synaptic NMDA receptors in the hippocampus. **J. Neurophysiol**. 99: 254-263, 2008.

170. Xu, W., Schluter, O.M., Steiner, P., Czervionke, B.L., Sabatini, B. & Malenka, R.C. Molecular dissociation of the role of PSD-95 in regulating synaptic strength and LTD. **Neuron** 57: 248-262, 2008.

171. Biou, V., Bhattacharyya, S. & Malenka, R.C. Endocytosis and recycling of AMPA receptors lacking GluR2/3. **Proc. Natl. Acad. Sci. U.S.A.** 105: 1038-1043, 2008.

172. Huang, Y.H., Lin, Y., Brown, T.E., Han, M.-H., Saal, D.B., Neve, R.L. Zukin, R.S., Sorg, B.A., Nestler, E.J., Malenka, R.C. & Dong, Y. CREB modulates the functional output of nucleus accumbens neurons: a critical role of NMDA receptors. **J. Biol. Chem.** 283; 2751-2760, 2008.

173. Luu, P. & Malenka, R.C. Spike timing-dependent long-term potentiation in ventral tegmental area dopamine cells requires PKC. **J. Neurophysiol.** 100: 533-538, 2008.

174. Biou, V., Brinkhaus H., Malenka, R.C. & Matus, A. Interactions between drebrin and Ras regulate dendritic spine plasticity. **Eur. J. Neurosci.** 27: 2847-2859, 2008.

175. Argilli, E., Sibley, D.R., Malenka, R.C., England, P.M. & Bonci, A. Mechanism and time course of cocaine-induced long-term potentiation in the ventral tegmental area. **J. Neurosci.** 28: 9092-9100, 2008.

176. Kaneko, M., Stellwagen, D., Malenka, R.C. & Stryker, M.P. Tumor necrosis factor-alpha mediates one component of competitive, experience-dependent plasticity in developing visual cortex. **Neuron** 58: 673-680, 2008.

177. Kaeser, P.S., Kwon, H.B., Blundell, J., Chevaleyre, V., Morishita, W., Malenka, R.C., Powell, C.M., Castillo, P.E. & Südhof, T.C. RIM1alpha phosphorylation at serine-413 by protein kinase A is not required for presynaptic long-term plasticity or learning. **Proc. Natl. Acad. Sci. U.S.A.** 105: 14680-14685, 2008.

178. Steiner, P., Higley, M.J., Xu, W., Czervionke, B.L., Malenka, R.C. & Sabatini, B.L. Destabilization of the postsynaptic density by PSD-95 serine 75 phosphorylation inhibits spine growth and synaptic plasticity. **Neuron** 60: 788-802, 2008.

179. Sudhof, T.C. & Malenka, R.C. Understanding synapses: past, present, and future. **Neuron** 60: 469-476, 2008.

180. Kreitzer, A.C. & Malenka, R.C. Striatal plasticity and basal ganglia circuit function. **Neuron** 60: 543-554, 2008.

181. Peng, Y.R., He, S., Marie, H., Zeng, S.Y., Ma, J., Tan, Z.J., Lee, S.Y., Malenka, R.C. & Yu, X. Coordinated changes in dendritic arborization and synaptic strength during neural circuit development. **Neuron** 61: 71-84, 2009.

182. Bhattacharyya, S., Biou, V., Xu, W., Schluter, O. & Malenka, R.C. A critical role for PSD-95/AKAP interactions in endocytosis of synaptic AMPA receptors. **Nature Neurosci.** 12: 172-181, 2009.

183. Daadi, M.M., Li, Z., Arac, A., Brueter, B.A., Sofilos, M., Malenka, R.C., Wu, J.C. & Steinberg, G.K. Molecular and magnetic resonance imaging of human embryonic stem cell-derived neural stem cell grafts in ischemic rat brain. **Mol. Ther.** 17: 1282-1291, 2009.

Publications (cont.)

184. Citri, A., Soler-Llavina, G., Bhattacharyya, S. & Malenka, R.C. N-methyl-D-aspartate receptor- and metabotropic glutamate receptor-dependent long-term depression are differentially regulated by the ubiquitin-proteasome system. **Eur. J. Neurosci.** 30: 1443-1450, 2009

185. Ko, J., Fuccillo, M.V., Malenka, R.C. & Sudhof, T.C. LRRTM2 functions as a neurexin ligand in promoting excitatory synapse formation. **Neuron** 64: 791-798, 2009.

186. Daadi, M.M., Lee, S.H., Arac. A., Grueter, B.A., Bhatnagar, R., Maag, A.L., Schaar, B., Malenka, R.C., Palmer, T.D. & Steinberg, G.K. Functional engraftment of the medial ganglionic eminence cells in experimental stroke model. **Cell Transplant**. 18: 815-826, 2009.

187. Russo, S.J., Dietz, D.M., Dumitriu, D., Morrison, J.H., Malenka, R.C. & Nestler, E.J. The addicted synapse: mechanisms of synaptic and structural plasticity in nucleus accumbens. **Tr. Neurosci**. 33: 267-276, 2010

188. Jurado, S., Biou, V. & Malenka, R.C. A calcineurin/AKAP complex is required for NMDA receptor-dependent long-term depression. **Nature Neurosci.** 13: 1053-1055, 2010.

189. Citri, A., Bhattacharyya, S., Ma, C., Morishita, W., Fang, S., Rizo, J. & Malenka, R.C. Calcium binding to PICK1 is essential for the intracellular retention of AMPA receptors underlying LTD. **J. Neurosci.** 30: 16437-16452, 2010.

190. Gruter, B., Brasjno, G. & Malenka, R.C. Postsynaptic TRPV1 triggers cell-type specific LTD in the nucleus accumbens. **Nature Neurosci.** 13: 1519-1525, 2010.

191. Malenka, R.C. & Malinow, R. Alzheimer's disease: recollection of lost memories. **Nature** 469: 44-45, 2011.

192. Luscher, C. & Malenka, R.C. Drug-evoked synaptic plasticity in addiction: from molecular changes to circuit remodeling. **Neuron** 69: 650-663, 2011.

193. Lammel, S., Ion, D.I., Roeper, J. & Malenka, R.C. Projection-specific modulation of dopamine neuron synapses by aversive and rewarding stimuli. **Neuron** 70: 855-862, 2011.

194. Ko J., Soler-Llavina G.J., Fuccillo, M.V., Malenka, R.C. & Südhof, T.C. Neuroligins/LRRTMs prevent activity- and Ca^{2+}/calmodulin-dependent synapse elimination in cultured neurons. **J. Cell Biol.** 194: 323-334, 2011.

195. Etherton, M., Foldy, C., Sharma, M., Tabuchi, K., Liu, X., Shamloo, M., Malenka, R.C. & Sudhof, T.C. Autism-linked neuroligin-3 R451C mutation differentially alters hippocampal and cortical synaptic function. **Proc. Natl. Acad. Sci. USA** 108: 13764-13769, 2011.

196. Soler-Llavina, G.J., Fuccillo, M.V., Ko, J., Sudhof, T.C. & Malenka, R.C. The neurexin ligands, neuroligins and leucine-rich repeat transmembrane proteins, perform convergent and divergent synaptic functions in vivo. **Proc. Natl. Acad. Sci. USA** 108: 16502-16509, 2011.

197. Citri, A., Pang, Z.P., Südhof, T.C., Wernig, M. & Malenka, R.C. Comprehensive qPCR profiling of gene expression in single neuronal cells. **Nat. Protoc**. 7: 118-127, 2011

198. Yu, W., Polepalli, J., Wagh, D., Rajadas, J., Malenka, R.C. & Lu, B. A critical role for the PAR-1/MARK-tau axis in mediating the toxic effects of Aβ on synapses and dendritic spines. **Hum. Mol. Genet**. 21: 1384-1390, 2012

199. Selcher, J.C., Xu, W., Hanson, J.E., Malenka, R.C. & Madison, D.V. Glutamate receptor subunit GluA1 is necessary for long-term potentiation and synapse unsilencing, but not long-term depression in mouse hippocampus. **Brain Res**. 1435: 8-14, 2012.

200. Ahmad, M., Polepalli, J.S., Goswami, D., Yang, X., Kaeser-Woo, Y.J., Südhof, T.C. & Malenka, R.C. Postsynaptic complexin controls AMPA receptor exocytosis during LTP. **Neuron**. 73: 260-267, 2012.

Publications (cont.)

201. Xu, W., Morishita, W., Buckmaster, P.S., Pang, Z.P., Malenka, R.C. & Südhof, T.C. Distinct neuronal coding schemes in memory revealed by selective erasure of fast synchronous synaptic transmission. **Neuron**. 73: 990-1001, 2012.

202. Grueter, B.A., Rothwell, P.E. & Malenka, R.C. Integrating synaptic plasticity and striatal circuit function in addiction. **Curr. Opin. Neurobiol.** 22: 545-551, 2012.

203. Nelson, A.B., Hang, G.B., Grueter, B.A., Pascoli, V., Luscher, C., Malenka, R.C. & Kreitzer, A.C. A comparison of striatal-dependent behaviors in wild-type and hemizygous Drd1a and Drd2 BAC transgenic mice. **J. Neurosci.** 32: 9119-9123, 2012.

204. Karayiorgou, M., Flint, J., Gogos, J.A., Malenka, R.C; Genetic and Neural Complexity in Psychiatry 2011 Working Group. The best of times, the worst of times for psychiatric disease. **Nat. Neurosci.** 15: 811-812, 2012.

205. Luscher, C. & Malenka, R.C. NMDA receptor-dependent long-term potentiation and long-term depression (LTP/LTD). **Cold Spring Harb. Perspect. Biol.** Jun 1; 4(6), 2012.

206. Daadi, M.M., Grueter, B.A., Malenka, R.C., Redmond, D.E. Jr. & Steinberg, G.K. Dopaminergic neurons from midbrain-specified human embryonic stem cell-derived neural stem cells engrafted in a monkey model of Parkinson's disease. **PLoS One** 7: e41120, 2012.

207. Lim, B.K., Huang, K.W., Grueter, B.A., Rothwell, P.E. & Malenka, R.C. Anhedonia requires MC4 receptor-mediated synaptic adaptations in nucleus accumbens. **Nature** 487: 183-189, 2012.

208. Lammel, S., Lim, B.K., Ran, C., Huang, K.W., Betley, M.J., Tye, K.M., Deisseroth, K. & Malenka, R.C. Input-specific control of reward and aversion in the ventral tegemental area. **Nature** 491: 212-217, 2012.

209. Anderson, G.R., Galfin, T., Xu., W., Aoto, J., Malenka, R.C. & Sudhof, T.C. Candidate autism gene screen identifies critical role for cell-adhesion molecule CASPR2 in dendritic arborization and spine development. **Proc. Natl. Acad. Sci. USA** 109: 18120-18125, 2012.

210. Jurado, S., Goswami, D., Zhang, Y., Molina, A.J., Sudhof, T.C. & Malenka, R.C. LTP requires a unique postsynaptic SNARE fusion machinery. **Neuron** 77: 542-558, 2013.

211. Grueter, B.A., Robison, A.J., Neve, R.L., Nestler, E.J. & Malenka, R.C. ΔFosB differentially modulates nucleus accumbens direct and indirect pathway function. **Proc. Natl. Acad. Sci. USA** 110: 1923-1928, 2013.

212. Kim, S.Y., Adhikari, A., Lee, S.Y., Marshel, J.H., Kim, C.K., Mallory, C.S., Lo, M., Pak, S., Mattis, J., Lim, B.K., Malenka, R.C., Warden, M.R., Neve, R., Tye, K.M. & Deisseroth, K. Diverging neural pathways assemble a behavioural state from separable features in anxiety. **Nature** 496: 219-223, 2013.

213. Foldy, C., Malenka, R.C. & Sudhof, T.C. Autism-associated neuroligin-3 mutations commonly disrupt tonic endocannabinoid signaling. **Neuron** 78: 498-509, 2013.

214. Soler-Llavina, G.J., Arstikaitis, P., Morishita, W., Ahmad, M., Sudhof, T.C. & Malenka, R.C. Leucine-rich repeat transmembrane proteins are essential for maintenance of long-term potentiation. **Neuron** 79: 439-446, 2013.

215. Aoto, J., Martinelli, D.C., Malenka, R.C., Tabuchi, K. & Sudhof, T.C. Presynaptic neurexin-3 alternative splicing trans-synaptically controls postsynaptic AMPA-receptor trafficking. **Cell** 154: 75-88, 2013.

216. Xu, P, Grueter, B.A., Britt, J.K., McDaneil, L., Huntington, P.J., Hodge, R., Tran, S., Mason, B.L., Lee, C., Vong, L., Lowell, B.B., Malenka, R.C., Lutter, M. & Pieper, A.A. Double deletion of melanocortin 4 receptors and SAPAP3 corrects compulsive behavior and obesity in mice. **Proc. Natl. Acad. Sci. USA** 110: 10759-10764, 2013.

217. Dolen, G., Darvishzadeh, A., Huang, K.W. & Malenka, R.C. Social reward requires coordinated activity of nucleus accumbens oxytocin and serotonin. **Nature** 501: 179-184, 2013.

218. Malenka, R.C. Rapid release revealed: honoring the synapse. **Cell** 154: 1171-1174, 2013.

Publications (cont.)

219. Bacaj, T., Wu, D., Yang, X. Morishita, W., Zhou, P. Xu, W., Malenka, R.C. & Sudhof, T.C. Synaptotagmin-1 and synaptotagmin-7 trigger synchronous and asynchronous phases of neurotransmitter release. **Neuron** 80: 947-959, 2013.

220. Rothwell, P., Fuccillo, M.V., Maxeiner, S., Hayton, S., Gokce, O., Lim, B.K., Fowler, S., Malenka, R.C. & Sudhof, T.C. Autism-associated neuroligin-3 mutations commonly impair striatal circuits to boost repetitive behaviors. **Cell**, 158: 198-212, 2014.

221. Gunaydin, L.A., Grosenick, L., Finkelstein, J., Kauvar, I.V., Fenno, L.E., Adhikari, A., Lammel, S., Mizabekov, J.J., Airan, R.D., Tye, K.M., Anikeeva, P., Malenka, R.C. & Deisseroth, K. Natural neural projection dynamics underlying social behavior**. Cell**, 157: 1535-1551, 2014.

222. Portmann, T., Yang, M., Mao, R., Panagiotakos, G., Ellegood, J., Dolen, G., Bader, P.L., Grueter, B.A., Goold, C., Fisher, E., Clifford, K., Rengarajan, P., Kalikhman, D., Loureiro, D., Saw, N.L., Zhengqui, Z., Miller, M.A., Lerch, J.P., Henkelman, R.M., Shamloo, M., Malenka, R.C., Crawley, J.N., & Dolmetsch, R.E. Behaivoral abnormalities and circuit deficits in the basal ganglia of a mouse model of 16p11.2 deletion syndrome. **Cell Rep.** 7: 1077-1092, 2014.

223. Dragicevic, E., Poetschke, C., Duda, J., Schlaudraff, F., Lammel, S., Schiemann, J., Fauler, M., Hetzel, A., Watanabe, M., Lujan, R., Malenka, R.C., Striessnig, J. & Liss, B. Cav1.3 channels control D2-autoreceptor responses via NCS-1 in substantia nigra dopamine neurons. **Brain** 137: 2287-2302, 2014.

224. Babiec, W.E., Guglietta, R., Jami, S.A., Morishita, W., Malenka, R.C. & O'Dell, T.J. Ionotropic NMDA receptor signaling is required for the induction of long-term depression in the mouse hiappocampus CA1 region. **J. Neurosci.** 34: 5285-5290, 2014.

225. Schwartz, N., Temkin, P., Jurado, S., Lim, B.K., Heifets, B.D., Polepalli, J.S. & Malenka, R.C. Decreased motivation during chronic pain requires long-term depression in the nucleus accumbens. **Science** 345: 535-542, 2014.

226. Dolen, G. & Malenka, R.C. The emerging role of nucleus accumbens oxytocin in social cognition. **Biol. Psychiat.** 76: 354-355, 2014.

227. Monteggia, L.M, Deisseroth, K., & Malenka, R.C. Depression: the best way forward. **Nature** 515: 200-201, 2014.

228. Steinberg, E.E., Christoffel, D.J., Deisseroth, K., & Malenka, R.C. Illuminating circuitry relevant to psychiatric disorders with optogenetics. **Curr. Opin. Neurobiol.** 30: 9-16, 2015.

229. Lammel, S., Steinberg, E.E., Foldy, C., Wall, N.R., Beier, K., Luo, L. & Malenka, R.C. Diversity of transgenic mouse models for selective targeting of midbrain dopamine neurons. **Neuron** 85: 429-438, 2015.

230. Doyle, K.P., Quach, L.N., Sole, M., Axtell, R.C., Nguyen, T.V., Soler-Llavina, G.J., Jurado, S., Han, J., Steinman, L., Longo, F.M., Schneider, J.A., Malenka, R.C. & Buckwalter, M.S. β-lymphocyte-mediated delayed cognitive impairment following stroke. **J. Neurosci.** 35: 2133-2145, 2015.

231. Arendt, K.L., Zhang, Y., Jurado, S., Malenka, R.C., Sudhof, T.C. & Chen, L. Retinoic acid and LTP recruit postsynaptic AMPA receptors using distinct SNARE dependent mechanisms. **Neuron** 86: 442-456, 2015.

232. Venkatesh, H.S., Johung, T.B., Caretti, V., Noll, A., Tang, Y., Nagaraja, S., Gibson, S.M., Mount, C.W., Polepalli, J., Mitra, S.S., Malenka, R.C., Vogel, H., Bredel, M., Mallick, P. & Monje, M. Neuronal activity promotes glioma growth through neuroligin-3 secretion. **Cell** 161: 803-816, 2015.

233. Bacaj, T., Ahmad, M., Jurado, S., Malenka, R.C. & Sudhof, T.C. Synaptic function of Rab11Fip5: selective requirement for hippocampal long-term depression. **J. Neurosci.** 35: 7460-7474, 2015.

Publications (cont.)

234. Deisseroth, K., Etkin, A. & Malenka, R.C. Optogenetics and the circuit dynamics of psychiatric disese. **JAMA** 313: 2019-2020, 2015.

235. Christoffel, D.J., Golden, S.A., Walsh, J.J., Guise, K.G., Heshmati, M., Friedman, A.K., Dey, A., Smith, M., Rebusi, N., Pfau, M., Ables, J.L., Aleyasin, H., Khibnik, L.A., Hodes, G.E., Ben-Dor, G.A., Deisseroth, K., Shapiro, M.L., Malenka, R.C., Ibanez-Tallon, I., Han, M.H. & Russo, S.J. Excitatory transmission at thalamo-striatal synapses mediates susceptibility to social stress. **Nature Neurosci.** 18: 962-964, 2015.

236. Fucillo, M.V., Foldy, C., Gokce, O., Rothwell, P.E., Sun, G.L., Malenka, R.C. & Sudhof, T.C. Single-cell mRNA profiling reveals cell-type-specific expression of neurexin isoforms. **Neuron** 87: 326-340, 2015.

237. Schwarz, L.A., Miyamichi, K., Gao, X.J., Beier, K.T., Weissbourd, B., DeLoach, K.E., Ren, J., Ibanes, S., Malenka, R.C., Kremer, E.J. & Luo, L. Viral-genetic tracing of the input-output organization of a central noradrenaline circuit. **Nature** 524: 88-92, 2015.

238. Anderson, G.R., Aoto, J., Tabuchi, K., Foldy, C., Covy, J., Yee, A.X., Wu, D., Lee, S.J., Chen, L., Malenka, R.C. & Sudhof, T.C. β-neurexins control neural circuits by regulating synaptic endocannabinoid signaling. **Cell** 162: 593-606, 2015.

239. Lerner, T.N., Shilyansky, C., Davidson, T.J., Evans, K.E., Beier, K.T., Zalocusky, K.A., Crow, A.K., Malenka, R.C., Luo, L., Tomer, R. & Deisseroth, K. Intact-brain analyses reveal distinct information carried by SNc dopamine subcircuits. **Cell** 162: 635-647, 2015.

240. Beier, K.T., Steinberg, E.E., DeLoach, K.E., Xie, S., Miyamichi, K., Schwarz, L., Gao, X.J., Kremer, E.J., Malenka, R.C. & Luo, L. Circuit architecture of VTA dopamine neurons revealed by systematic input-output mapping. **Cell** 162: 622-634, 2015.

241. Bacaj, T., Wu, D., Burre, J., Malenka, R.C., Liu, X. & Sudhof, T.C. Synaptotagmin-1 and -7 are redundantly essential for maintaining the capacity of the readily-releasable pool of synaptic vesicles. **PLoS Biology** 13(10):e1002267, 2015.

242. Rothwell, P.E., Hayton, S.J., Sun, G.L., Fuccillo, M.V., Lim, B.K. & Malenka, R.C. Input- and output-specific regulation of serial order performance by corticostriatal circuits. **Neuron** 88: 345-356, 2015.

243. Fuccillo, M.V., Rothwell, P.E. & Malenka, R.C. From synapses to behavior: what rodent models can tell us about neuropsychiatric disease. **Biol. Psychiat.** 79: 4-6, 2016.

244. Berndt, A., Lee, S.Y., Wietek, J., Ramakrishnan, C., Steinberg, E.E., Rashid, A.J., Kim, H., Park, S., Santoro, A., Frankland, P.W., Iyer, S.M., Pak, S., Ahrlund-Richter, S., Delp, S.L., Malenka, R.C., Josselyn, S.A., Carlen, M., Hegemann, P. & Deisseroth, K. Structural foundations of optogenetics: determinants of channelrhodopsin ion selectivity. **Proc. Natl. Acad. Sci. USA** 113: 822-829, 2016.

245. Heifets, B.D. & Malenka, R.C. MDMA as a probe and treatment for social behaviors. **Cell** 166: 269-272, 2016.

246. Gokce, O., Stanley, G.M., Treutlein, B., Neff, N.F., Camp, J.G., Malenka, R.C., Rothewell, P.E., Fuccillo, M.V., Sudhof, T.C. & Quake, S.R. Cellular taxonomy of the mouse striatum as revealed by single-cell RNA-Seq. **Cell Rep**. 16: 1126-1137, 2016.

247. Foldy, C., Darmanis, S., Aoto, J., Malenka, R.C., Quake, S.R. & Sudhof, T.C. Single-cell RNAseq reveals cell adhesion molecule profiles in electrophysiologically defined neurons. **Proc. Natl. Acad. Sci. USA** 113: E5222-5231, 2016.

248. Jiang, M., Polepalli, J., Chen, L.Y., Zhang, B., Sudhof, T.C. & Malenka, R.C. Conditional ablation of neuroligin-1 in CA1 pyramidal neurons blocks LTP by a cell-autonomous NMDA receptor-independent mechanisms. **Mol. Psychiatry.** 22: 375-383, 2017.

Publications (cont.)

249. Polepalli, J.S., Wu, H., Goswami, D., Halpern, C.H., Sudhof, T.C. & Malenka, R.C. Modulation of excitation on parvalbumin interneurons by neuroligin-3 regulates the hippocampal network. **Nature Neurosci**. 20: 219-229, 2017.

250. Francois, A., Low, S.A., Sypek, E.I., Christensen, A.J., Sotoudeh, C., Beier, K.T., Ramakrishnan, C., Ritola, K.D., Sharif-Naeini, R., Deisseroth, K., Delp, S.L., Malenka, R.C., Luo, L., Hantman, A.W. & Scherrer, G. A brainstem-spinal cord inhibitory circuit for mechanical pain modulation by GABA and enkephalins. **Neuron** 93: 822-839, 2017.

251. Wu, D., Bacaj, T., Morishita, W., Goswami, D., Arendt, K.L., Xu, W., Chen, L., Malenka, R.C. & Sudhof, T.C. Postsynaptic synaptotagmins mediate AMPA receptor exocytosis during LTP. **Nature** 544: 316-321, 2017.

252. Temkin, P., Morishita, W., Goswami, D., Arendt, K.L., Xu, W., Chen, L. & Malenka, R.C. The retromer supports AMPA receptor trafficking during LTP. **Neuron** 94: 74-82, 2017.

253. Humphreys, K., Malenka, R.C., Knutson, B. & MacCoun, R.J. Brains, environments and policy responses to addiction. **Science** 356: 1237-1238, 2017.

254. Beier, K.T., Kim, C.K., Hoerbelt, P., Hung, L.W., Heifets, B.D., DeLoach, K.E., Mosca, T.J., Neuner, S., Deisseroth, K., Luo, L. & Malenka, R.C. Rabies screen reveals GPe control of cocaine-triggered plasticity. **Nature** 549: 345-350, 2017.

255. Hung, L.W., Neuner, S., Polepalli, J.S., Beier, K., Wright, M., Walsh, J.J., Luo, L., Deisseroth, K., Dolen, G. & Malenka, R.C. Gating of social reward by oxytocin in the ventral tegmental area. **Science** 357: 1406-1411, 2017.

Books

Nestler, E.J., Hyman, S.E. and Malenka, R.C. Molecular Neuropharmacology: A Foundation for Clinical Neuroscience**,** McGraw-Hill, New York (2001)

Schatzberg, A.F. and Nemeroff, C.B. Textbook of Psychopharmacology, 3rd Ed**.** Section I Editor (R.C. Malenka): Principles of Psychopharmacology, American Psychiatric Publishing, Inc., Arlington, VA (2004).

Nestler, E.J., Hyman, S.E. and Malenka, R.C. Molecular Neuropharmacology: A Foundation for Clinical Neuroscience (second edition)**,** McGraw-Hill, New York (2009)

Malenka, R.C. (editor), Intercellular Communication in the Nervous System, Elsevier/Academic Press, San Diego, CA (2009)

Nestler, E.J., Hyman, S.E., Holzman D. and Malenka, R.C. Molecular Neuropharmacology: A Foundation for Clinical Neuroscience (third edition)**,** McGraw-Hill, New York (2015)

Chapters

1. Kocsis, J.D., Malenka, R.C., Connors, B.W., Waxman, S.G. and Cummins, K.L. Population response characteristics of fiber tracts in central white matter. In Nerve Conduction Velocity Distributions: New Methods of Electrophysiological Evaluation. Cummins, K., Dorfman, L. and Leifer, L. (eds.), A.R. Liss Publ., New York, 1981.

2. Malenka, R.C., Andrade, R. and Nicoll, R.A. Physiology of GABA inhibition in the hippocampus. J. Mind & Behav. 8: 549-557, 1987.

3. Malenka, R.C., Madison, D.V., Dutar, P., Andrade, R. and Nicoll, R.A. Neurotransmitters, ion channels, and second messengers in the hippocampus. In Modulation of Synaptic Transmission and Plasticity in Nervous Systems. Hertting, G. and Spatz, H.-C. (eds.), NATO ASI Series H: Cell Biology, vol. 19, Springer-Verlag, Berlin, 1988.

Chapters (cont.)

4. Malenka, R.C., Hamblin, M.W. and Barchas, J.D. Biochemical hypotheses of affective disorders and anxiety. In Basic Neurochemistry. Spiegel, G.J., Albers, R.W., Agranoff, B.W. and Molinoff, P.B. (eds.), Raven Press, New York, 1989.

5. Nicoll, R.A., Malenka, R.C. and Dutar, P. Electrophysiological studies on $GABA_B$ receptors in the CNS. In GABA: Basic Research and Clinical Applications. Bowery, N.G. and Nistico, G. (eds.), Pythagora Press, 1989.

6. Malenka, R.C., Kauer, J.A. and Nicoll, R.A. Mechanisms underlying the initiation of long-term potentiation of synaptic transmission in the hippocampus. In Molecular Biology: Proceedings of the First N.I.M.H. Conference, Scheller, R.H. and Zalcman, S. (eds.) U.S. Dept. of Health and Human Services, Rockville, Maryland, 1989.

7. Nicoll, R.A., Malenka, R.C. and Kauer, J.A. Mechanisms involved in the initiation and expression of long-term potentiation. In Brain Signal Transduction and Memory. Ito, M. and Nishizuka, Y. (eds.), Academic Press/Harcourt Brace Jovanovich Japan, Inc., Tokyo, 1989.

8. Nicoll, R.A., Malenka, R.C. and Kauer, J.A. The role of calcium in long-term potentiation. In Calcium, Membranes, Aging and Alzheimer's Disease. Khachaturian, Z.S., Cotman, C. and Pettegrew, J.W. (eds.), Ann. N.Y. Acad. Sci. 568: 166-170, 1989.

9. Malenka, R.C., Kauer, J.A., Perkel, D.J. and Nicoll, R.A. Long-term potentiation in the hippocampus. In Regulation of Membrane Function: Short-term and long-term. (Progress in Cell Research, Vol. 1), Ritchie, J.M., Magistretti, P.J. and Bolis, L. (eds.), Elsevier Science Publishers, Amsterdam, 1990.

10. Malenka, R.C. Postsynaptic events mediating LTP. In Excitatory Amino Acids and Synaptic Transmission. Wheal, H. and Thomson, A. (eds.), Academic Press, London, 1991.

11. Malenka, R.C. Long-term potentiation of synaptic transmission. In Biological Basis of Substance Abuse. Barchas, J. and Korenman, S.G. (eds.), Oxford University Press, New York, 1993.

12. Malenka, R.C. Multiple forms of NMDA receptor-mediated synaptic plasticity in the hippocampus. In Long-Term Potentiation: A Debate of Current Issues, vol. II. Baudry, M. and Davis, J. (eds.), MIT Press, Boston, 1994.

13. Barchas, J.D., Hamblin, M.W. and Malenka, R.C. Biochemical hypotheses of mood and anxiety disorders. In Basic Neurochemistry: Molecular, Cellular, and Medical Aspects, 5th Ed. Spiegel, G.J., Albers, R.W., Agranoff, B.W. and Molinoff, P.B. (eds.), Raven Press, New York, 1994.

14. Malenka, R.C. Postsynaptic events mediating LTP and LTD. In Excitatory Amino Acids and Synaptic Transmission, 2nd Edition. Wheal, H. and Thomson, A. (eds.), Academic Press, London, 1995.

15. Malenka, R.C. and Siegelbaum, S.A. Synaptic plasticity. In Synapses, Cowan, W.M., Sudhof, T.C. and Stevens, C.F. (eds.) Johns Hopkins University Press, Baltimore, MD, 2001.

16. Malenka, R.C. Synaptic plasticity. In Neuropsychopharmacology: The Fifth Generation of Progress. Davis, K.L., Charney, D., Coyle, J.T. and Nemeroff, C. (eds.) Lippincott Williams & Wilkins, Philadelphia, 2002.

17. Hopf, F.W., Bonci, A. and Malenka, R.C. Dopamine and synaptic plasticity in mesolimbic circuits. In Dopamine Handbook, Ivesen, L.L., Iversen, S.D., Dunnett, S.B. and Bjorklund, A. (eds.) Oxford University Press, New York, NY, 2010.

18. Marie, H. and Malenka, R.C. Acute in vivo expression of recombinant proteins in rat brain using sindbis virus. In The Dynamic Synapse: Molecular Methods in Ionotropic Receptor Biology, Kittler, J.T. and Moss, S.J. (eds.) CRC Press, Boca Raton, FL 2006.

Abstracts (not listed)

Invited Talks and Presentations: International

1987

NATO Advanced Research Workshop on Modulation of Synaptic Transmission and Plasticity in Nervous Systems, Castelvecchio Pascoli, Italy

1989

Japan Science Foundation, International Workshop on Plasticity of Synaptic Transmission, Kanazawa, Japan
13th International Conference on Biological Membranes, Crans-sur-Sierre, Switzerland

1990

Plenary Lecture, International Society for Biomedical Research on Alcoholism, Toronto, Canada
Molecular Mechanisms in Signal Transduction, McGill University, Montreal, Canada

1991

University of Alberta School of Medicine, Dept. of Pharmacology, Edmonton, Alberta, Canada
Molecular Mechanisms of Synaptic Plasticity, Port Douglas, Australia

1992

Long-term Potentiation: A Debate of Current Issues, Gif-sur-Yvette, France
Renunion Anual Sociedad de Biologia de Chile, Symposium, Puyehue, Chile

1993

Dahlem Conference, Molecular Mechanisms Underlying Higher Neural Functions, Berlin, Germany

1994

Activity Dependent Neuronal Plasticity, Association pour la Neuropyschopharmacologie, Paris, France
Ernst Klenk Conference on Excitatory Synapses-Learning, Plasticity and Cell Death, Cologne, Germany

1995

University of Calgary School of Medicine, Neuroscience Seminar Series, Calgary, Canada
Long-term Potentiation: A Debate of Current Issues, Third Symposium, Carry-le-Rouet, France.
Magdeburg International Neurobiological Symposium, Learning and Memory: Synaptic and Systemic Views Magdeburg, Germany.
4th IBRO World Congress of Neuroscience, Kyoto, Japan
IBRO Satellite Symposium, Cellular Determinants of Learning and Memory, Tokyo, Japan.

1996

Dynamics of Functional Connectivity in Visual Cortical Networks, Royaumont, France.
Jacques Monod Conference, Synaptic Plasticity and Cellular Mechanisms of Memory, Aussois, France
2nd International Meeting on Metabotropic Glutamate Receptors, Taormina, Italy

1997

Designated Lecture, The Physiological Society, Trinity College, Dublin, Ireland
Human Frontier Science Program Workshop, Quantal Transmission in the Central Nervous System, Strasbourg, France
Israel Science Foundation Workshop, The Neocortical Local Circuit, Sde-Boker, Israel

1998

University of Montreal, The Chemical Synapse, Montreal Canada
Gordon Research Conference, Molecular and Cellular Neurobiology, Beijing, China

1999

Weizmann Institute for Science Symposium, Neocortical Columns, Rehovot, Israel
Fifth International Brain Research Organization World Congress of Neuroscience, Jerusalem, Israel
Third International Meeting on Metabotropic Glutamate Receptors, Taormina, Sicily, Italy
Neuronal Circuits: From Molecules to Organisms, Ascona, Switzerland
International Symposium on Molecular Dynamics in Cell Function, Tokyo, Japan
Organizer, “The Neural Mechanisms Of Addiction”, Institute Juan March, Madrid, Spain

Invited Talks and Presentations: International (cont.)

2000

International Congress on "Hormones, Brain, and Neuropsychopharmacology", Rhodes Greece
Magdeburg Neurobiological Symposium: Mechanisms of Learning and Memory, Magdeburg Germany

2001

Gordon Research Conference, Excitatory Amino Acids and Brain Function, Il Ciocco, Italy
LTP Explained: Molecular, Cellular, Behavioral and Computational Aspects, Angers, France
International Society for Neurochemistry, Buenos Aires, Argentina

2002

Organizing the Brain: Genes, Neurons and Circuits, EMBP-FMI Conference, Ascona, Switzerland,
Herbert Jasper Lecture, Montreal Neurological Institute, Montreal, Canada
RIKEN Brain Science Institute, Tokyo, Japan
Japan-United Kingdom Workshop, From Molecules to Memory, Nara, Japan

2003

Australian Neuroscience Society, ANS Overseas Lecture, Adelaide, Australia
Long-term Potentiation: Enhancing Neuroscience for 30 Years, Royal Society, London, U.K.
University of Edingburgh, Neuroscience Program, Edinburgh, Scotland
Sixth IBRO World Congress of Neuroscience, Prague, Czech Republic
Formation and Function of Neuronal Circuits, EMBO Meeting, Ascona, Switzerland

2004

Spinogenesis and Synaptic Plasticity, 1st Westerburg Symposium, Westerburg, Germany
International Symposium on Brain Functional Genomics, East China Normal University, Shanghai, China

2005

Symposium on Synaptic Function and Plasticity, University of British Columbia, Vancouver, Canada
Gordon Research Conference, Excitatory Amino Acids and Brain Function, Aussois, France

2006

The Active Dendrite, Nobel Mini-symposium, Karolinska Institute, Stockholm, Sweden

2007

Winter Conference on Neural Plasticity, Moorea, Tahiti
Dopamine-50 Years, Goteborg, Sweden
Ecole Polytechnique Federale de Lausanne, Life Science Symposium on Neuroscience, Lausanne, Switzerland

2008

Gordon Research Conference, Neurobiology of Brain Disorders, Oxford, U.K.
Brain Plasticity Symposium, Queensland Brain Institute, University of Queensland, Brisbane, Australia
Plenary Lecture, Japan Neuroscience Society Annual Meeting, Tokyo, Japan
Conference Aquitaine, The Plastic Brain, Arcachon, France

2009

Learning and Addiction, Institute for Advanced Studies & the Israel Science Foundation, Jerusalem, Israel
9th European Meeting on Glial Cells in Health and Disease, Paris, France
Presidential Lecture, Society of Biological Psychiatry, Vancouver, Canada

2010

Plenary Lecture, University of Cambridge Neuroscience Symposium, Cambridge, UK
Cantoblanco Workshops on Biology, Memory Formation and Memory Loss, Madrid, Spain
Conference Aquitaine, Insights into the Neurobiology of Addiction, Arcachon, France

2011

Winter Conference on Neural Plasticity, Moorea, Tahiti
Gordon Research Conference, Cannabinoid Function in the CNS, Les Diablerets, Switzerland

Invited Talks and Presentations: International (cont.)

Genetic and Neural Complexity in Psychiatry, Santorini, Greece
7th International Meeting on Metabotropic Glutamate Receptors, Taormina, Sicily, Italy

2012

International Symposium on Ionotropic Glutamate Receptors, Valencia, Spain
Gordon Research Conference, Molecular and Cellular Neurobiology, Hong Kong, China
Synaptic Basis of Disease, Geneva, Switzerland
8th Federation of European Neurosciences Forum of Neuroscience, Barcelona, Spain

2013

International Society for Neurochemistry, Synapse Satellite Meeting, Playa del Carmen, Mexico
International Dopamine Meeting, Alghero, Italy
Francis Crick Symposium on Neuroscience, Cold Spring Harbor Asia Conference, Suzhou, China
Excitatory Synapses and Brain Function, Gordon Research Conference, Les Diablerets, Switzerland
Genetic and Neural Complexity in Psychiatry 2013 (organizer), Santorini, Greece
Membrane Traffic at the Synapse: The Cell Biology of Synaptic Plasticity, Baeza, Spain
The Neurobiology of Action, ESF-FENS Brain Research Conference, Stresa, Italy

2014

Neuroplasticity in Substance Addiction and Recovery, ZiF, Universitat Bielefeld, Bielefeld, Germany
Ernst Strungmann Forum, Diseases of the Nervous System: What is to be Done?, Frankfurt, Germany
22nd Jerusalem School in Life Sciences, Israel Institute for Advanced Studies, Jerusalem, Israel
Safra Center for Brain Sciences, The Hebrew University of Jerusalem, Jerusalem, Israel
8th International Meeting on Metabotropic Glutamate Receptors, Taormina, Italy
Synaptic Basis of Cognitive Dysfunction, Centro Interdisciplinario de Neurociencia, Valparasio, Chile

2015

Dept. of Neurochemistry, University of Tokyo School of Medicine, Tokyo, Japan
Dept. of Neurophysiology, Keio University School of Medicine, Tokyo, Japan
RIKEN Brain Sciences Institute, Tokyo, Japan
Roche Pharma Research and Early Development, Basel, Switzerland
Dept. of Neuroscience Retreat, Institut Pasteur, Paris, France
Genetics and Neural Complexity in Psychiatry, Santorini, Greece
Ernst Strungmann Forum, Computational Psychiatry, Frankfurt, Germany
From Synapses to Circuits and Behaviour, Cairns, Australia
International Society for Neurochemistry, Cairns, Australia
5th European Synapse Meeting, Bristol, United Kingdom

2016

World Economic Forum, Davos, Switzerland
18th International Neuroscience Winter Conference, Solden, Austria
Neurobiology of Mental Health Conference, Geneva, Switzerland
People's Hospital Neurology Conference, Shenzhen, China
Dopamine 2016, Vienna, Austria
5th Champalimaud Neuroscience Symposium, Lisbon, Portugal

2017

Genomics and Systems Biology VII, NYU Abu Dhabi Institute, Abu Dhabi, United Arab Emerates
Functions and Mechanisms of Neuromodulation, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
Learning, Memory and Synaptic Plasticity, FENS, Rungstedgaard, Denmark (co-organizer)
Neurobiology of Addiction Gordon Research Conference, Hong Kong
International Society for Neurochemistry Meeting, Paris, France
Past, Present and Future of Brain Research, Bordeaux, France
MDMA and psilocybin: Bridging science and clinical applications, Lisbon, Portugal (co-organizer)

Invited Talks and Presentations: National

1988

The Neurosciences Institute of the Neurosciences Research Program, Summer Atelier in Theoretical Neurobiology, New York, NY
Scripps Clinic and Research Foundation, Neurosciences Seminar Series, San Diego, CA.

1989

Johns Hopkins University School of Medicine, Neuroscience Seminar Series, Baltimore, MD
American Academy of Neurology Annual Meeting, Neurophysiology Course, Chicago, IL.
The Neurosciences Institute of the Neurosciences Research Program, Summer Atelier in Theoretical Neurobiology, New York, NY

1991

The First UCLA/NIDA Conference on the Biological Basis of Substance Abuse, Los Angeles, CA
Stanford University School of Medicine, Dept. of Neurology, Grand Rounds, Stanford, CA
U.C.S.F., Dept. of Neurology, Grand Rounds, San Francisco, CA

1991

ACNP Meeting, San Juan, Puerto Rico

1992

Winter Conference on Brain Research, Workshop Organizer, Steamboat Springs, CO
University of Alabama at Birmingham, Dept. of Neurobiology, Birmingham, AL
Brandeis University, Neuroscience Seminar Series, Waltham, MA
University of California at Davis, Neuroscience Seminar Series, Davis, CA
University of California at Irvine, Dept. of Psychobiology, Irvine, CA

1993

Neurobiology of Learning & Memory Meeting, Park City, Utah
University of Chicago, Neuroscience Seminar Series, Chicago, IL
California Institute of Technology, Neuroscience Seminar Series, Pasadena, CA
Vanderbilt University, Dept. of Pharmacology, Nashville, TN
University of Washington, Dept. of Pharmacology, Seattle, WA
Harvard Medical School, Dept. of Neurobiology, Boston, MA
The Cortical Neuron Conference, Asilomar, CA.
The N.I.H. Conference on Calcium and Neuronal Plasticity, Bethesda, MD.
Purdue University, Neuroscience Retreat Keynote Speaker, West Lafayette, IN.
Basic Mechanisms of the Epilepsies, Conference and Workshop, Yosemite National Park, CA

1994

Winter Conference on Brain Research, Workshop Organizer, Snowbird, Utah
Meeting of the Neuroscience Research Program Associates, The Neurosciences Institute, La Jolla, CA
Yale University School of Medicine, Dept. of Psychiatry, New Haven, CT
XIXth C.I.N.P. Congress, Symposium speaker, Washington, D.C.
Howard Hughes Medical Institute, Molecular and Genetic Approaches to Mental Illness, Chevy Chase, MD

1995

University of Texas at Houston Medical School, Dept. of Neurobiology and Anatomy, Houston, TX
University of Texas Southwestern Medical School, Dept. of Pharmacology, Dallas, TX
University of Tennessee School of Medicine, Neuroscience Seminar Series, Knoxville, TN
International Symposium on Calcium-Binding Proteins and Calcium Function in Health and Disease, Airlie, VA.
University of Virginia Signal Transduction Symposium, Charlottesville, VA
American Society of Addition Medicine, Role of Neurobiology in Addiction Medicine, Washington, DC
University of California, Berkeley, Dept.of Molecular and Cellular Biology, Berkeley, CA.
Stanford University, Dept. of Cellular and Molecular Physiology, Stanford, CA.
Organizer, Third Annual Neuropharmacology Symposium, "Presynaptic Mechanisms of Neurotransmission", San Diego, CA. (3 day meeting, 500 in attendance)
Duke University, Dept. of Pharmacology, Durham , NC

Invited Talks and Presentations: National (cont.)

1996

Winter Conference on Brain Research, Snowmass, CO
National Institute of Neurological Disorders and Stroke Neuroscience Series, Bethesda, MD.
Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
Third International Symposium: Basic Mechanisms of the Epilepsies, San Diego, CA.
Biennial McKnight Endowment Fund for the Neurosciences, San Diego, CA.
Keynote Address, Oregon Health Sciences University Neuroscience Retreat, Portland, OR.
Banbury Center Conference: Plasticity of Glutamate Receptors, Cold Spring Harbor, NY.
University of California, Davis, Program in Neuroscience, Davis, CA.

1997

U.C.L.A. Neuroscience Program, Los Angeles, CA.
Children's Hospital Neuroscience Program, Harvard Medical School, Boston, MA.
Gordon Research Conference, Excitatory Amino Acids and Brain Function, Plymouth, N.H.
Cold Spring Harbor Summer Course on Neural Mechanisms of Learning and Memory, Cold Spring Harbor, NY
Wayne State University School of Medicine, Grand Rounds, Dept. of Psychiatry, Detroit, MI.
University of Wisconsin, Neuroscience Program, Madison, WI
Case Western University School of Medicine, Neuroscience Program, Cleveland, OH

1998

University of California, Berkeley, Dept. of Molecular and Cell Biology, Berkeley, CA
Keystone Symposia: Synapse Formation and Function: From Neuromuscular Junction to CNS, Park City, UT
NIH Symposium: The Science of Brain Disease, Bethesda, MD
University of Pittsburgh, Neuroscience Program, Pittsburgh, PA
University of Southern California, Neuroscience Program, Los Angeles, CA
National Institute on Drug Abuse, The Cellular and Molecular Basis of Emotional Memory: Implications for Addiction, Bethesda, MD.
Ionotropic Glutamate Receptors, 7th Neuropharmacology Conference, Los Angeles, CA

1999

The Zaffaroni Foundation, Neurobiology and Genetics of Addiction, San Francisco, CA
Baylor University School of Medicine, Neuroscience Program, Houston, TX
Howard Hughes Medical Institute, Scientific Workshop on Synapses, Chevy Chase, MD
29th Annual Society for Neuroscience Meeting, Special Lecture, Miami, FL
Learning and Memory Conference, Claremont College, Ontario, CA

2000

Adler Symposium: Biology of Memory: Normal functions & Age-associated impairments, San Diego, CA
AAAS Annual Meeting and Science Innovation Exposition, Washington, D.C.
67th Stated Meeting of the Neuroscience Research Program Associates, San Diego, CA
Neurobiology of Addiction 2000, Austin, TX
Brown University School of Medicine, The Dynamic Brain: Molecules Mathematics the Mind, Providence, RI
University of Alabama, Birmingham, Neuroscience Program Retreat, Keynote Speaker, Birmingham, AL
Vollum Research Institute, Oregon Health Sciences University, Portland, OR
Yale University School of Medicine, Dept. of Psychiatry Grand Rounds, New Haven, CT
A.C.N.P., San Juan, Puerto Rico

2001

University of Pittsburgh, Neuroscience Program, Pittsburgh, PA
Yale University School of Medicine, Neuroscience Program, New Haven, CT
68th Stated Meeting of the Neuroscience Research Program Associates, San Diego, CA
University of California, Irvine, Neuroscience Program, Irvine, CA
Gallo Research Center and Clinic, University of California, San Francisco, Emeryville, CA
Society for Biological Psychiatry Annual Meeting, Presidential Lecture, New Orleans, LA
Gordon Conference on Catecholamines, Proctor Academy, NH.
University of Utah, Neuroscience Program, Salt Lake City, Utah
University of California, San Francisco, Dept. of Psychiatry Grand Rounds, San Francisco, CA

Invited Talks and Presentations: National (cont.)

Conf. Chairman, Molecular Mechanisms of Synaptic Function, Neuropharmacology Conference, San Diego, CA
A.C.N.P., Waikoloa, Hawaii

2002

Marsh Endowed Lecture in Pharmacology and Neurochemistry of Addiction, School of Pharmacy, Texas Tech University Health Sciences Center, Amarillo, TX
Emory University School of Medicine Grand Rounds, Dept. of Psychiatry and Behavioral Sciences, Atlanta, GA
Northwestern University, Dept. of Neurobiology and Physiology, Evanston, IL
M.I.T., Neuroscience Program, Cambridge, MA
33rd Annual International Narcotics Research Conference, Asilomar, CA
Organizer, Symposium on "Addiction and the Brain", Stanford University School of Medicine, Stanford, CA
University of Chicago, Keynote Speaker, 4th Annual Brain Research Foundation Neuroscience Day, Chicago, IL
University of California, Davis, Keynote Speaker, 2002 Neuroscience Retreat, Bodega Bay, CA
Gruter Institute for Law & Behavioral Research, The Science, Policy and Law of Addictive Subtances: Licit and Illicit Strategies in the Context of Tobacco, Center for Advanced Studies in Behavioral Sciences, Stanford, CA.

2003

Washington University, Neuroscience Program, St. Louis, MO
Brandeis University, Keynote Speaker for Volen Center for Complex Systems Retreat, Boston, MA
University of Pennsylvania, Keynote Speaker, Institute of Neurological Sciences Annual Retreat, Philadelphia, PA
Glutamate and Disorders of Cognition and Motivation, New York Academy of Sciences, New Haven, CT
University of Washington, Krebs Student Lectureship, Dept. of Pharmacology, Seattle, WA
Sixth Annual Stanford Symposium on Developmental Approaches to Psychopathology, Stanford, CA
U.C.S.F. Symposium on Biological Basis of Alcoholism and Addiction, San Francisco, CA
University of Maryland, Neuroscience Program, Baltimore, MD
Gordon Research Conference on Excitatory Amino Acids and Brain Function, Mount Holyoke College, MA
Cold Spring Harbor Course on Cellular Biology of Addiction, Cold Spring Harbor, NY
Brown University, Neuroscience Seminar Series, Providence, RI

2004

UCSD, Neuroscience Seminar Series, La Jolla, CA
Salk Institute, Adler Foundation Symposium on Alzheimer's Disease, Discussant, La Jolla, CA
NIH Conference, The Synapse: Molecular Mechanisms of Plasticity, St. Michaels, MD
Cold Spring Harbor Meeting, Channels, Receptors & Synapses, Session Chair, Cold Spring Harbor, NY
Vanderbilt University Summer Conference, Frontiers in Addiction Biology: Genomics and Beyond, Nashville, TN.
McKnight Conference on Neuroscience, Disease Workshop, Aspen, CO
MIT Picower-RIKEN Neuroscience Symposium, New Frontiers in Brain Science: From Molecules to Mind, Cambridge, MA
Roche Palo Alto Seminar Series, Palo Alto, CA
The Cytoskeleton and Synaptic Function, Neuropharmacology Conference, San Diego, CA
UC Santa Barbara, Neuroscience Seminar Series, , Santa Barbara, CA
Association for Research in Nervous and Mental Disease, Substance Abuse: New Approaches to Understanding and Treatment, New York, NY
Skirball Institute, New York University, Neurobiology Seminar Series, , New York, NY

2005

NINDS, Down Syndrome: Toward Optimal Synaptic Function and Cognition, Washington, DC
Neurosciences Research Program, Neurosciences Institute, La Jolla, CA
University of Cincinnati, Neuroplasticity in Health and Disease Symposium, Cincinnati, OH
Neuroscience Seminar Series, University of Southern Californai, Los Angeles, CA
Stanford University, Genetics, Neurobiology and Addiction: Where are the Answers?, Palo Alto, CA
John Flynn Memorial Lecture, Dept. of Psychiatry, Yale University, New Haven CT
Dept. of Physiology, Northwestern University, Evanston, IL
Neuroscience Seminar Series, University of California, Berkeley
Symposium Chair and Speaker, ACNP Meeting, Waikoloa, Hawaii

Invited Talks and Presentations: National (cont.)

2006

Neurosciences Research Program Annual Meeting, Neurosciences Institute, La Jolla, CA
U.S.-Japan Workshop, Coordination of Structural and Functional Synaptic Plasticity, Maui, HI
Keynote Lecture, Channels, Receptors & Synapses Meeting, Cold Spring Harbor Lab, NY
Honors Program Lecture Series, New York University School of Medicine, New York, NY
Neurobiology of Addiction Symposium, Picower Center, M.I.T., Cambridge, MA
Dept. of Neurobiology, Harvard Medical School, Boston, MA
Gordon Research Conference, Synaptic Transmission, New London, NH
Presidential Symposium on Neuroscience, Univ. Minnesota, Minneapolis, MN
Dept. of Neurobiology, Duke University, Durham, NC
Perl Neuroscience Prize Lecture, University of North Carolina, Chapel Hill, NC
Frontiers of Neurosciences Drug Discovery Meeting, Merck Research Lab, Boston, MA
Special Lecture, Society for Neuroscience Annual Meeting, Atlanta, GA
Public Lecture, Neurosciences Institute, La Jolla, CA
Dept. of Neuroscience, Johns Hopkins University, Baltimore, MD

2007

Keystone Symposia, Neurobiology of Addiction, Sante Fe, New Mexico
Gordon Research Conference, Glia Biology: Functional Interactions Among Glia and Neurons, Ventura, CA
Plenary Lecture, International Congress on Schizophrenia Research, Colorado Springs, CO
N.I.H. Neuroscience Seminar Series, Bethesda, MD
Chair, Gordon Research Conference, Excitatory Synapses and Brain Function, New London, NH
International Symposium on Parkinson Research, National Parkinson Foundation Meeting, San Diego, CA
N.I.D.A. Mini Convention, Frontier in Addiction Research, San Diego, CA
A.C.N.P. Meeting, Boca Raton, FL

2008

Winter Conference on Brain Research Symposium, Molecular Mechanisms of Synaptic Plasticity, Snowbird, UT
US-Japan Brain Research Collaborative Program: Receptor Trafficking and Cell Biology of Neurons, Asilomar, CA
Keynote Speaker, Neuroscience Day, University of New Mexico, Albuquerque, NM
Gladstone Institute of Neurological Sciences, Seminar Series, U.C.S.F., San Francisco, CA
Committee on Neurobiology Seminar Series, University of Chicago, Chicago, IL
Neuroscience Seminar Series, Baylor College of Medicine, Houston, TX
Keynote Lecture, Brain Research Foundation 10th Annual Neuroscience Day, Chicago, IL

2009

Synapses: Postsynaptic Mechanisms of Plasticity, NIH, Warrenton, VA
Skirball Symposium, NYU, Structure of the Synapse, New York, NY

2010

Adler Symposium on Alzheimer Disease, Salk Institute, La Jolla, CA.
Gordon Conference on Synaptic Transmission, University of New England, Biddeford, Maine
Neuroscience Seminar Series, Mt. Sinai School of Medicine, New York, NY

2011

University Distinguished Lecture, University of Texas Southwestern School of Medicine, Dallas, Texas
Neuroscience Seminar Series, U.C.S.D., San Diego, CA.
Grand Rounds, Dept. of Psychiatry, U.C.S.F., San Francisco, CA.
Keynote Lecture, Ernest Gallo Clinic & Research Center Retreat, Santa Cruz, CA.
Gordon Research Conference, Excitatory Synapses & Brain Function, Stonehill College, Mass.
Molecular and Cellular Cognition Society Symposium, Washington, DC
Society for Neuroscience Symposium, Cell-type Specific Plasticity in the Basal Ganglia, Washington, DC
American College of Neuropsychopharmacology, Waikoloa, Hawaii

2012

Grand Rounds, Dept. of Psychiatry, Stanford University
Keynote Speaker, ApoE, Alzheimer's and Lipoprotein Biology, Keystone Symposium, Keystone, CO

Invited Talks and Presentations: National (cont.)

Broad Neurobiology and Disease Seminar Series, Duke University, Durham, NC
One Mind for Research Conference, UCLA, Los Angles, CA
Hille Lecture, Dept. of Physiology and Biophysics, University of Washington, Seattle, WA
Center for Neuroscience Retreat, University of Pittsburgh, Pittsburgh, PA
Cell Symposia: Neuromodulatory Mechanisms, New Orleans, LA.
Simons Foundation Autism Research Initiative Meeting, New York, NY
American College of Neuropsychopharmacolgy, Hollywood, FL

2013

Neuroscience Seminar Series, Scripps Research Institute, Jupiter, FL
Catecholamines, Gordon Research Conference, Mt. Snow, VT
Emerging Genetics and Neurobiology of Severe Mental Illness, Broad Institute, MIT, Cambridge, MA
Neuroscience Seminar Series, Brown University, Providence, RI
Plenary Speaker, Molecular Psychiatry Association Meeting, San Francisco, CA

2014

Cold Spring Harbor Laboratory, Neuroscience Seminar Series, Cold Spring Harbor, NY
New York University, Center for Neural Sciences Seminar Series, New York, NY
Margaret Bidwell Memorial Lecture, Dept. of Brain & Cognitive Sciences, MIT, Cambridge, MA
Gordon Conference on Basal Ganglia, Ventura, CA
Gordon Conference on Synaptic Transmission, Waterville Valley, NH
Washington University School of Medicine, Neuroscience Seminar Series, St. Louis, MO

2015

Dept. of Neuroscience, University of Pittsburgh, Pittsburgh, PA
MSTP Seminar Series, University of California, Irvine, CA
Co-Organizer, Motivational Circuits, HHMI Janelia Research Campus, Ashburn, VA
Excitatory Synapses and Brain Function Gordon Conference, Newport, RI
Neuroscience Program, Universidad Central del Caribe, San Juan, Puerto Rico
Plasticity in Biology, Foundation IPSEN and Cell Press, La Jolla, CA.

2016

Basal Ganglia Gordon Research Conference, Ventura, CA
Molecular Mechanisms in the Synapse, HHMI Janelia Research Campus, Ashburn, VA
Dept. of Neuroscience, University of Minnesota, Minneapolis, MN
Optogenetics Gordon Research Conference, Bethel, ME
Synaptic Transmission, Gordon Research Conference, Waterville, NH
Molecular Psychiatry Meeting, Maui, HI

2017

Dept. of Neurobiology, University of Maryland School of Medicine, Baltimore, MD
Axelrod Symposium, NIMH, Bethesda, MD
Neuroscience Seminar Series, University of Massachusetts School of Medicine, Worcester, MA
Neurobiology Seminar Series, Harvard Medical School, Boston, MA
Neuroscience Seminar Series, Medical University of South Carolina, Charleston, SC
McKnight Endowment Fund for Neuroscience Meeting, Aspen, CO
Neuroscience Seminar Series, University of California, Davis

Grant Support

7/89-6/92	Klingenstein Fellowship Award in the Neurosciences
9/89-8/94	N.I.M.H. (R29 MH45334), "Mechanisms of Synaptic Plasticity in the Hippocampus" (P.I.)
9/90-8/94	NARSAD Young Investigator Award
7/90-6/93	McKnight Scholars Award in Neuroscience

Grant Support (cont.)

9/90-9/92	Alfred P. Sloan Research Fellow
9/91-8/96	N.I.M.H. Research Scientist Award, Level II
9/96-8/01	N.I.M.H. Independent Scientist Award
9/94-8/00	N.I.A. (RO1 AG12928) “Mechanisms of Synaptic Plasticity in the Hippocampus" (P.I.)
12/93-8/00	N.I.N.D.S (P01 NS16033-15) “Function and Development of the Synapse”(co-P.I.)
10/96-9/99	Human Frontier Science Program “Modulation of synaptic efficacy by phosphorylation mechanisms” (co-P.I.)
1/97-12/00	McKnight Investigator Award in Neuroscience
3/95-8/10	N.I.D.A. (5 RO1 DA09264) “Drugs of abuse & synaptic processes in dopamine system " (P.I.)
4/01-3/11	N.I.M.H. (5 R37 MH063394), MERIT Award, “Mechanisms of synaptic plasticity in the hippocampus” (P.I.)
7/03-4/18	N.I.D.A. (P01 DA008227) Program Project, “Molecular neurobiology of drug addiction” (E. Nestler, P.I.), Project 3, “Synaptic plasticity in the mesolimbic dopamine system” (R.C. Malenka, P.I.)
9/06-8/11	N.I.N.D.S. (P01 NS053862) Program Project, “Mechanisms and functions of presynaptic plasticity” (C.Garner, P.I.), Project 2, “Electrophysiological analysis of RIM function in presynaptic plasticity” (R.C. Malenka and N. Calakos, co-P.I.’s)
5/07-4/08	NARSAD Distinguished Investigator Award
11/08-10/10	Fidelity Foundation, ‘Molecular mechanisms of synaptic plasticity in the hippocampus” (P.I.)
9/09-8/14	N.I.M.H. (P50 MH086403) Conte Center Program Project, “Activity-dependent synaptic and circuit plasticity”, (R.C. Malenka: Director:); Project 2, “Input specific synaptic plasticity in hippocampal circuits.” (R.C. Malenka: P.I.)
9/09-8/11	N.I.M.H. (RO1 MH089054) “A systematic test of the relation of ASD heterogeneity to synaptic function” (T. Sudhof and R.C. Malenka, co-P.I.’s)
9/01-8/13	N.I.M.H. (RO1 MH063394), “Mechanisms of synaptic plasticity in the hippocampus” (P.I.)
12/11-11/13	N.I.D.A. (R21 DA03295501), "Cell type-specific roles of Homer proteins in synaptic plasticity" (P.I.)
8/11-7/14	Simons Foundation Autism Research Initiative, "Mesocorticolimbic dopamine circuitry in mouse models of autism" (P.I.)
10/14-9/17	Simons Foundation Autism Research Initiative, "Neural mechanisms of social reward in mouse models of autism" (P.I.)
4/15-2/20	N.I.M.H. (P50 MH086403) Conte Center Program Project, “Activity-dependent synaptic and circuit plasticity”, (R.C. Malenka, Director: PI Project 2)

University and Public Service

Department of Psychiatry--UCSF

1989-1993	Biomedical Research Support Grant Committee
1990-1999	Committee on Animal Research

1990-1994	Residency Selection Committee
1990-1991	Faculty Search Committee - Assistant Professor, Psychopharmacology
1990-1991	Faculty Search Committee - Assistant Professor, Child Psychiatry
1990-1991	Faculty Search Committee - Director of Alzheimer's Disease Center
1991-1992	Faculty Search Committee - Assistant Professor, Keck Center for Integrative Neuroscience
1991-1992	Faculty Search Committee - Assistant Professor
1993	Chair, Faculty Search Committee -Assistant Professor
1993-1999	Member, Center for Neurobiology and Psychiatry
1994-1999	Compensation Plan Committee (Chair, 1995-present)
1994-1999	Co-Director, N.I.M.H. Training Grant, Molecular Approaches to Mental Illness
1995	Chair, Search Committee, J. and S. Robertson Chair in Neurobiology and Pscyhiatry
1995-1996	Search Committee, Chief of Psychiatry, VAMC
1995-1996	Brain-Behavior Research Center Committee
1996	Five Year Review Committee, Dept. of Psychiatry, UCSF-Mt. Zion Medical Center
1996-1997	Search Committee, Chief of Psychiatry, UCSF-Mt. Zion Medical Center
1996-1997	Horizon Committee
1997-1999	Executive Advisory Committee
1997-1999	Associate Director, Center for Neurobiology and Psychiatry
1997-1999	Chair, Search Committee, Drug Abuse Psychopharmacologist, VAMC

Department of Psychiatry and Behavioral Sciences--Stanford University

1999-present	Executive Committee
1999-2004	Residency Selection Committee
2001-present	Appointments and Promotions Committee
2007-present	Associate Chair

Clinical Duties--UCSF

1991-1996	Attending, Continuing Care Clinic, V.A. Medical Center (5 hrs./week)
1991-1999	Senior O.D. Coverage, Langely Porter Psychiatric Institute (2 weeks/yr.)

Department of Physiology--UCSF

1989-1994	Neuroscience Program Admissions Committee
1993-1999	Machine and Electronics Shop Committee

University Wide--UCSF

1991-1997	Research Evaluation and Allocation Committee
1994-1999	Student Research Committee
1994-1999	Ad Hoc Promotion Committees (7 total; Chairman for 1)
1996-1997	Chairman, Subcommittee for establishing a Center for the Neurobiology of Addiction
1997-1999	Director, Center for the Neurobiology of Addiction

University Wide—Stanford

2003-2008	Executive Committee, Stanford Neuroscience Institute
2004-2005	Chairman, Search Committee for the Avram Goldstein Endowed Professorship
2008-2013	co-Director, Stanford Institute for Neuro-innovation and Translational Neurosciences
2013-present	Deputy Director, Stanford Neurosciences Institute

Teaching (Formal)--UCSF

Fall Quarter (1989) - Guest lecturer in core course for PGY-II psychiatry residents - 6 hours
Spring Quarter (1990) - Neuroscience 231 - Graduate Seminar - "Neurotransmitter Mechanisms in the Central Nervous System" - 35 hours
Winter Quarter (1991) - Psychiatry 131A - Med Student II course - Small group leader - 24 hours
Spring Quarter (1992) - Neuroscience 245 - Graduate Seminar - "The Limbic System" - 25 hours

Spring Quarter (1993-1997) - Anatomy 103 - Nervous System Function & Form, 1st year medical students - 3 hours
Spring Quarter (1993) - Biological Foundations of Psychiatry -PGY3 residents - 15 hours
Fall Quarter (1993) - Biological Foundations of Psychiatry - PGY3 residents - 15 hours
Fall Quarter (1993) - Neuroscience 231 - Graduate Seminar - "Synaptic mechanisms" - 40 hours
Winter Quarter (1996, 1997, 1998) -Neuroscience 201B-Developmental & Systems Neurobiology- 6 hours
Spring Quarter (1998) - Neuroscience 231 - Graduate Seminar - "Synaptic mechanisms" - 40 hours

Teaching (Formal)--Stanford University

Fall Quarter (1999, 2000), Biol. Sci. 154/254; Neurobiology 254—"Long-term potentiation"—2 hours
Spring Quarter (1999-2003), Dept. of Psychiatry & Behavioral Sciences, Seminar for child residents-1 hour
Fall Quarter (2001) Neurobiology 250—Neurotechniques –6 hours
Winter Quarter (2002, 2003) Neurobiology 200- 2 hours
Winter Quarter (2004-present) Neurobiology 200-1 hour

Predoctoral Students

1990	John Rabin (M.D.)
1990	Christopher deCharms (Ph.D.)
1991	Sophia Colamarino (Ph.D.)
1991	David Selig (M.D.)
1992	Saleem Nicola (Ph.D.)
1992	Jennifer Cummings (Ph.D.)
1994	Greg Hjelmstad (Ph.D.)
1996	Sarah Craven (Ph.D.)
1997	Eric Schnell (M.D.,Ph.D.)
2001	Sonja Pyott (Ph.D.)
2001	Sheela Singla (M.D.,Ph.D.)
2008	Rohit Prakash (Ph.D.)
1992-1997	Saleem Nicola
1993-1997	Jennifer Cummings
1994-1998	Greg Hjelmstad
1995-1997	David Selig, M.D.
2001-2007	Sheela Singla
2003-2007	Jennifer Tsui

Postdoctoral Fellows Supervised

1990-1991	Andrius Baskys, M.D.,Ph.D.
1990-1992	Yan-You Huang, M.D.
1991-1992	Asuncion Colino, M.D.
1991-1997	Rosel Mulkey, Ph.D.
1992-1993	Rodney Sayer, M.D.,Ph.D.
1992-1994	Caroline Herron, Ph.D.
1992-1995	Samuel Kombian, Ph.D.
1992-1995	Diane Spillane, Ph.D.
1993-1995	Michael Crair, Ph.D.
1994-1996	John Isaac, Ph.D.
1995-1999	Chad Christine, M.D.
1996-2000	Reed Carroll, Ph.D.
1996-1998	Thanos Tzounopoulos, Ph.D.
1997-1998	Dan Feldman, Ph.D.
1997-1999	David Selig, M.D.
1997-1998	Saleem Nicola, Ph.D.
1998-2001	Mark Thomas, Ph.D.
1998-2002	Alison Barth, Ph.D.
1998-2002	Huihui Xia, Ph.D.
1998-1999	Antonello Bonci, Ph.D.

Postdoctoral Fellows Supervised (cont.)

1998-2002	Eric Beattie, Ph.D.
1999-present	Wade Morishita, Ph.D.
1999-2004	Xiang Yu, Ph.D.
1999-2002	Corinne Beurrier, Ph.D.
1999-2001	Pablo Castillo, M.D., Ph.D.
2000-2002	Steven Braithwaite, Ph.D.
2000-2002	Hiroki Yasude, M.D., Ph.D.
2000-2004	Karl Deisseroth, Ph.D.
2001-2005	Helene Marie, Ph.D.
2001-2007	David Stellwagen, Ph.D.
2001-2004	Daniel Saal,, M.D., Ph.D.
2001-2005	Nicole Calakos, M.D.,Ph.D.
2002-2006	Maria Paz Regalado, Ph.D.
2002-2004	William Ju, Ph.D.
2002-2004	Yan Dong, Ph.D.
2002-2006	Oliver Schlueter, M.D., Ph.D.
2002-2008	Weifeng Xu, Ph.D.
2002-2004	Rachel Ozer, Ph.D.
2003-2007	Anatol Kreitzer, Ph.D.
2004-2009	Virginie Biou, Ph.D.
2004-2009	Percy Luu, Ph.D.
2005-2010	Samarjit Bhattacharyya, Ph.D.
2006-2012	Ami Citri, Ph.D.
2006-2012	Brad Grueter, Ph.D.
2006-2010	Gabor Brasjno, Ph.D.
2007-2013	Gilberto Soler-Llavina, Ph.D.
2007-2013	Mohiuddin Ahmad, Ph.D.
2008-2013	Sandra Jurado, Ph.D.
2008-2014	Marc Fucillo, M.D.,Ph.D.
2008-2017	Jai Polepalli, Ph.D.
2009-2015	Stephan Lammel, Ph.D.
2009-2013	Byungkook Lim, Ph.D.
2009-2014	Gul Dolen, M.D.,Ph.D.
2009-2016	Debanjan Goswami, Ph.D.
2010-2016	Patrick Rothwell, Ph.D.
2010-2014	Neil Schwartz, Ph.D.
2010-2015	Csaba Foldy, Ph.D.
2010-2017	Garrett Anderson, Ph.D.
2010-2017	Richard Wu, Ph.D.
2011-2014	Scott Hayton, Ph.D.
2011-2013	Pamela Arstikaitis, Ph.D.
2012-present	Paul Temkin, Ph.D.
2013-present	Elizabeth Steinberg, Ph.D.
2013-present	Nicholas Wall, Ph.D.
2013-2017	Lin Wai Hung, Ph.D.
2013-present	Daniel Christoffel, Ph.D.
2013-present	Boris Heifets, M.D.,Ph.D.
2013-present	Kevin Beier, Ph.D.
2014-present	Jessica Walsh, Ph.D.
2014-2017	Medhi Bhouri, Ph.D.
2015-present	Peter Neumann, Ph.D.
2015-present	Paul Hoerbelt, Ph.D.
2015-present	Xiaoting Wu, Ph.D.
2016-2017	Sarah Baghat, Ph.D.
2016-present	Felicity Gore, Ph.D.
2017-present	Monique Smith, Ph.D.

Ph.D. Qualifying Exams/Thesis Defense

Margaret Bradbury
James Sabry
Nomi Robinson
Marc Weisskopf
Deda Gillespie
Albert Hsia
Charlotte Boettiger
Stephen Gomperts
Elizabeth Bellocchio
Sarah Craven
Vikas Duvvuri
Matthew Huggins
Sarah Carter
Rohit Prakash
Lisa Gunaydin
Seung Yong Kim
Joanna Mattis
Aslihan Selimbeyoglu
Erica Seigneur
Kelly Zalocsky
Xintong Dong
Kelly Hennigan
Piper Keys
John Peters

Service to Professional Publications

Editorial Boards

Neuron
Neuropharmacology
American Journal of Psychiatry (past)
Trends in Neuroscience
NeuroMolecular Medicine
Brain Work, Neuroscience Newsletter (Dana Press)
Current Opinion in Neurobiology
Experimental Neurology
Biological Psychiatry (past)
Neuroscience Letters
Hippocampus
Neuron Glia Biology

Ad Hoc Referee (selected)

Cell
Science
Nature
Nature Neuroscience
Neuron
Proc. Natl. Acad. Sci. U.S.A.
Journal of Physiology
Journal of Neuroscience
Journal of Neurophysiology
Neuroscience
Synapse
Glia
European Journal of Neuroscience
Biological Psychiatry

Service to National/International Organizations

1994	Howard Hughes Predoctoral Fellowship Review Committee
1994	Site Visit to NICHD, Laboratory of Cellular and Molecular Neurophysiology
1994-2002	Grant Reviewer, Wellcome Trust, U.K.
1994-1999	American Psychiatric Association, Dept. of Psychiatry Research Liason
1995-2003	Grant Reviewer, Medical Research Council, U.K.
1995-2010	Grant Reviewer, Human Frontier Science Program, France
1996-1998	Member, Neurophysiology and Neuroanatomy Study Section, NIDA
1999-2000	Member, MCDN5 Study Section, NIH
1999-2004	Society for Neuroscience, Program Committee (Chairman, 2003)
2001-2005	National Advisory Council on Drug Abuse, NIH (NIDA)
2001-present	Scientific Council, Brain and Behavior Research Foundation (formerly NARSAD)
2006-2010	Society for Neuroscience, Council
2008	Chair, NIMH Conte Centers in Basic Neuroscience Review Committee
2006-2016	Scientific Advisory Board, Stanley Center for Psychiatric Research, Broad Institute, MIT/Harvard
2010-present	Board of Directors, The Brain Research Foundation, Chicago, IL
2010-present	Scientific Advisory Board, International Mental Health Research Organization
2012-present	Scientific Advisory Board, Cure Alzheimer's Fund.
2012-2015	Council, Amercian College of Neuropsychopharmacology
2012-2015	Scientific Advisory Board, One Mind for Research
2013-present	Scientific Adviser, Neurocampus, Bordeaux, France
2016-present	Wellcome Trust Review Committee, London, UK

Scientific Advisory Boards (for profit)

2000-2008	Merck, Inc.
2000-2008	Renovis, Inc.
2003-2005	Sention, Inc.
2006-2015	Seaside Therapeutics, Inc.
2007-2008	Amnestix, Inc.
2008-2011	Pfizer, Inc.
2010-present	Cognitive Therapeutics, Inc.
2012-present	Circuit Therapeutics, Inc.

Community Service

1993	Lecture to Friends of Langley Porter Psychiatric Institute
1995	Lecture to Public School Teachers, U.C. Berkeley Extension
1996	Brown Bag Lecture, UCSF