Curriculum Vitae

Name: Ko, Chien-Ping

Address: Section of Neurobiology, Department of Biological Sciences
University of Southern California
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Citizenship: USA

Marital Status: Married

Education:

1966-1970	BS, Department of Zoology, National Taiwan University Taipei, Taiwan.
1971-1975	Ph.D., Department of Physiology and Biophysics Washington University School of Medicine St. Louis, Missouri Supervisors: Drs. Richard P. Bunge and Harold Burton. Topics: synapse formation in tissue culture.

Experience:

1975-1978	Postdoctoral Fellow Dept. of Anatomy University of Colorado Medical Center Denver, Colorado Supervisor: Dr. Stephen Roper. Topics: sprouting and reinnervation in the cardiac ganglia.
1978-1981	Postdoctoral Fellow NINCDS, National Institutes of Health Bethesda, Maryland Supervisor: Dr. Thomas Reese. Topics: degeneration of the neuromuscular junction.
1981-1987	Assistant Professor Department of Biological Sciences University of Southern California, Los Angeles, California
1985	Invited instructor of a workshop on "Cellular Neurobiology" held in Taipei, Taiwan (7/15-8/2).

1987-1996	Associate Professor Department of Biological Sciences University of Southern California Los Angeles, California
1991, Spring	Sabbatical leave working with Dr. Uel J. McMahan Department of Neurobiology, Medical School Stanford University, Stanford, California
1994-2009	Associate Director/Director (alternate yearly) Center for Electron Microscopy and Microanalysis University of Southern California
1996-present	Professor Department of Biological Sciences University of Southern California Los Angeles, California
2008-2011	Director of Graduate Studies, Neurobiology PhD Program Department of Biological Sciences University of Southern California Los Angeles, California
2009-2012	Head, Section of Neurobiology Department of Biological Sciences University of Southern California Los Angeles, California

Awards and Honors:

1979-1981	Muscular Dystrophy Association Postdoctoral Fellowship
1983-1987	NIH Research Career Development Award.
2004	"Faculty of the Year Award" voted by students at the USC Neuroscience Graduate Program.

Previous Grants:

1981-1985	NIH Grant NS17954 *Formation and Elimination of Synapses* $104,291 (direct cost). Principal Investigator.
1982-1983	Biomedical Research Support Grant $9,900 (direct cost). Principal Investigator.

1983-1984 NIH Shared Instrumentation Grant S10 RR01560
Molecular and Cellular Biology Research Electron Microscope.
$79,000 (direct cost). Co-Investigator.

1983-1985 Muscular Dystrophy Association Research Grants
Functional and Ultrastructural Changes in Synaptic Membranes during Formation of Neuromuscular Junctions.
$72,612 (direct cost plus 8% indirect cost). Principal Investigator.

1985-1986 Biomedical Research Support Grant
$2,500 (direct cost). Principal Investigator.

1983-1987 NIH Grant NS00728 Research Career Development Award
$211,000 (direct cost). Principal Investigator.

1985-1988 NIH Grant NS17954
Formation and Elimination of Synapses.
$170,286 (direct cost). Principal Investigator.

1986-1988 Muscular Dystrophy Association Research Grant.
Differentiation of the Active Zone at the Neuromuscular Junction.
$86,022 (direct cost plus 8% indirect cost). Principal Investigator.

1986-1989 National Science Foundation BNS-8518572
Structure and Function of the Active Zone.
$190,000 (direct and indirect costs). Principal Investigator.

1988-1992 NIH Grant NS17954
Formation and Elimination of Synapses.
$260,513 (direct cost). Principal Investigator.

1991-1992 Biomedical Research Support Grant
$10,000 (direct cost). Principal Investigator.

1992-1995	National Institutes of Health, NS 30051 *Structure, Function and Development of the Active Zone*. $264,166 (direct cost). Principal Investigator.
1995	National Science Foundation, BIR-9419941 *Confocal microscope for biological research.* $87,471 (direct cost). Co-Investigator.
1992-1997	National Institutes of Health, NS17954, *Formation and Elimination Synapses*. $400,885 (direct cost). Principal Investigator.
1995-1999	National Institutes of Health, NS 30051 *Structure, Function and Development of the Active Zone*. $424,786 (direct cost). Principal Investigator.
1997-2000	Muscular Dystrophy Association *The role of perisynaptic Schwann cells at the neuromuscular junctions*. $145,213 (direct cost). Principal Investigator.
1997-2002	National Institutes of Health, NS 17954 Formation and Elimination of Synapses. $612,992 (direct cost). Principal Investigator.
2000-2003	Muscular Dystrophy Association *The role of perisynaptic Schwann cells at the neuromuscular junctions*. $164,589 (direct cost). Principal Investigator.
2002-2007	National Institutes of Health, NS 17954 *Formation and Elimination of Synapses* $688,750 (direct cost). Principal Investigator.
2005-2008	The Amyotrophic Lateral Sclerosis Association *The role of skeletal muscles in motoneuron survival in SOD1 mutant mice*. $176,160 (direct cost). Principal Investigator.

2007-2008 Muscular Dystrophy Association
The role of skeletal muscle in amyotrophic lateral sclerosis
$170,858 (direct cost). Principal Investigator.

2008-2011 Muscular Dystrophy Association
Synaptic defects in Spinal Muscular Atrophy
$279,736 (direct + 10% indirect). Principal Investigator.

12/08/09 USC College Instrumentation Initiative for a qPCR system. $40,991.80. Principal Investigator.

04/01/09-03/31/11
NIH/NINDS 1R21NS063296
Synapse Loss in Spinal Muscular Atrophy
$391,399 (direct + indirect). Principal Investigator.

09/01/11-08/31/12
Families of Spinal Muscular Atrophy
Novel Neuromuscular Preparations for in vivo evaluation of drug efficacy in SMA
$70,000 (direct + 8% indirect). Principal Investigator

08/01/08– 05/31/12
NIH/NIGMS R01 GM085791
Molecular control of regulated exocytosis
$1,258,684 (direct + indirect).
Robert Chow (PI), C.-P. Ko (Co-PI, total ~$80,000)

09/01/11-08/31/14
California Institute for Regenerative Medicine, RB3-02161
Use of Human iPS Cells to Study Spinal Muscular Atrophy
$1,172,515 (direct +20% indirect)
Jiing Kuan Yee (PI, City of Hope), C.-P. Ko (Co-PI, total direct cost, $221,660)

12/01/12-02/28/15
Families of Spinal Muscular Atrophy
The role of glial cells in SMA
$150,000 (direct cost, $138,889 + 8% indirect).
Principal Investigator

11/01/14-02/28/16
Families of Spinal Muscular Atrophy (Cure SMA)
Can Calibr Compounds Ameliorate Disease Progression and Correct Motor Circuit Defects in Delta7 Mice
$104,999 (direct cost, $97,221 + 8% indirect).
Principal Investigator

07/01/14-05/31/16
NIH, R21 NS085514
Spinal muscular atrophy therapy using recombinant SMN proteins
$46,000 (total direct cost for the Ko Lab). Co-Investigator. (PI: Rui Zhao, University of Colorado; total direct cost, $275,000)

Current Grants:

03/31/08-12/31/18
Spinal Muscular Atrophy Foundation
Synapse Loss in the SMNΔ7 Mouse Model of Spinal Muscular Atrophy
$1,934,692 (direct cost + 8% indirect).
Principal Investigator.

04/01/16-03/31/20
NIH, R01 NS094721-01
An Orally Bioavailable Drug Candidate for Spinal Muscular Atrophy
$303,999 (expected total 2-year direct cost for the Ko Lab, starting 04/01/17-03/31/19,). Collaborator. (PI: Peter Schultz, The California Institute for Biomedical Research, total direct cost, $1,795,032)

Editorial Boards:

Journal of Neurocytology (2000-2008)
Neuron Glia Biology (2004-2011)

Review Panels:

NIH study section Neurology B-1, ad hoc member (1986).
NIH study section NSD-C, regular member (2000-2002).
Academic Review, Dept. of Zoology, National Taiwan University (2001)
Academic Review, Institute of Zoology, National Taiwan University (2005)

Academic Review, Institute of Physiology, National Taiwan University (2012)
Academic Review, Institute of Anatomy & Cell Biology, National Taiwan University (2013)
Academic Review, Institute of Physiology, National Taiwan University (2017)

Selected Invited symposium/Seminar:

2004 Society for Neuroscience symposium on "Molecular mechanisms of Schwann cell-axon interactions"
2005 Gordon Research Conference on "Glial Biology"
2007 The 11th International Conference on Myasthenia Gravis and Related Disorders.
2008 The 4th Banbury Conference on Spinal Muscular Atrophy.
2010 TREAT-NMD International workshop "Preclinical testing in SMA"
2011 The 14th Annual Richard P. Bunge Memorial Lecture at University of Miami (2/18/2011).
2011 A Symposium in Honor of Yoshi Kidokoro: "Synaptic Biophysics and Excitable Cell Physiology" (2/25/2011)
2011 Society for Neuroscience Satellite Symposium, "Pretzels and endplates: Motor neuron pathology and the role of SMN in motor neuron development" (11/14/2011)
2011 USC Physics and Astronomy Colloquium
2011 Repligen Corporation, Waltham, MA (12/6/11)
2011 Novartis Institutes for BioMedical Research, Inc., Cambridge, MA (12/6/11)
2011 PTC Therapeutics, South Plainfield, NJ (12/8/11)
2012 Invited speaker, Kaohsiung Medical University, Kaohsiung, Taiwan
2012 Academic Review Committee, Institute of Physiology, National Taiwan University, College of Medicine, Taipei, Taiwan
2012 Podium speaker, the 16th Families of SMA Research Group Meeting, Bloomington, MN.
2013 Invited speaker, Institute of Anatomy & Cell Biology, National Taiwan University, College of Medicine, Taipei, Taiwan
2013 Podium speaker, the 17th Families of SMA Research Group Meeting, Anaheim, CA
2013 Invited speaker, USC Neurobiology Section seminar series (9/30/2013)
2014 Invited speaker, 2014 FightSMA Annual Research Conference (4/10/14)
2014 Invited speaker, 2014 New Directions in Biology and Disease of Skeletal Muscle Conference (6/30/14)
2016 Invited speaker, the 15th Asian and Oceanian Myology Center Scientific Meeting, Hsinchu, Taiwan (05/27/16)
2017 Invited speaker, "From genetic mutation to motor neuron degeneration"

Biogen sponsored symposium at the XXII World Congress of Neurology, Kyoto, Japan

Society Membership:

Society for Neuroscience

Courses Taught:

Undergraduate:
General Biology, Neurobiology, Honors Seminar, Introductory Physiology, Cell Physiology, Human Physiology for General Education. Seminar in Neurobiology.
Graduate:
Developmental Neurobiology, Laboratory Techniques of Neurobiology, Seminar in Physiology (topics: The Synapse; Glia-Neuron Interactions), Neurobiology of Disease, Advanced Neuroscience.

Examples of Committees served:

Curriculum committee
Faculty search committees
Center for electron microscopy and microanalysis, Director/Associate Director, 1994-2009
Graduate student orientation committee, Committee on Graduate Studies, Chair
Neuroscience Graduate Program admission committee
Neuroscience Graduate Program student advisory committee, Chair
International Education Committee, Teaching Committee,
Academic Integrity Review Committee
Departmental Bylaws Committee
Department of Biological Sciences Curriculum Committee
Faculty Advisor of USC Pre-Medical Asian Pacific American Medical Student Association (2009-Present).
Dean's Neuroscience Advisory Committee
Provost Neuroscience Task Force (2009-2010)
Neurobiology Section Faculty Merit Review Committee
USC Faculty Tenure & Privileges Appeals Committee (reviewed 2 cases, 2008-2014)
Neurobiology Ph.D. Program (BNRO), Director (2008-2011)
Neurobiology Section, Head (2009-2012)
Neurobiology Section Curriculum Committee, Chair (2013-present)
Neurobiology Faculty Search Committee (fall 2014-spring 2015)
Neurobiology Faculty Review Committee, Chair (2016-present)
USC Neuroscience Undergraduate Program, Executive Committee (2014-present)

Ph.D. Students trained:

Jon Propost, 1986; Lanlin Chen, 1995; Samir Koirala, 2002; Guan Cao, 2004; Linga Vinay

Reddy, 2004; Jiefei Yang, 2004; Zhihua Feng, 2007; Young-eun Yoo, 2009. Ming-Yi Lin, 2010; Kar Ling, 2011; Chiara Mazzasette, 2016.

Postdoctoral fellows trained:

Bob Nystrom, 1988; Debra Folsom, 1989-1991; T. Somasekhar, 1991; Yoshie Sugiura, 1995 -2000; Stephanie Astrow, 1996-1998; Kar Ling, 2012-2014. Chunyi Zhou, 2013-2015. Pei-Fen Yen, 2014-2017. Chiara Mazzasette, 2016-2017.

Current postdoctoral fellow/Senior Research Associate:

Zhihua Feng 2009-present

Recent Rotation students (2009-present):

Spring 2009-Christi Evans (NGP) and Lori Kleidman (IEB)
Fall 2009-Yun Li (BNRO), Simren Dulai (BNRO), Radhika Palkar (NGP)
Fall 2010- Madeline Andrews (BNRO), Chiara Mazzasette (NGP), Muye Zhu (NGP),
Fall 2011-Yu-Hsiang Tu (BNRO), Spring 2012, Joo Yeun Lee (NGP)
Fall 2012- Eliza Bacon (NGP)

Recent PhD guidance/dissertation Committees served (2009-present):

Eliza Bacon, Rui Chang, Xun Chen, Jung Hwa Cho, Paul Chung, Shanxi Feng (Chair), Pragya Goel, Yu-Tien Hsu, Shun-Ping Huang, Jason Junge, Koto Kikuma (Chair), Wendy Knowlton, Xiling Li (Chair), Ming-Yi Lin (Chair), Sebastian Shaoyu Lin, Kar Yn Ling, Erika Lippoldt, Louise Menendez, Rudy Mora, Radhika Palkar (Chair), Thomas Penny, Soo-Yeon Sun, Supraja Varadarajan, Jing Xu, Ken Yamauchi, Young Eun Yoo (Chair), Jingyang Zhong (Chair), Muye Zhu.

Recent undergraduate students:

Rebecca Gibbs (08-10); Kausar Ali (11-12); Phuong (Harmony) Huynh (11-12); Abhishek Verma (11-12); Arko Ghosh (13-14), Marshall Estlund (13-14), Lucy Chen (fall 14). Most received supports from WiSE, SOAR, SURF, or Provost undergraduate fellowships.

Papers:

1. Bunge, R.P., Rees, R., Wood, P., Burton, H. and **Ko, C.-P.** (1974) Anatomical and physiological observations on synapses formed on isolated autonomic neurons in tissue culture. Brain Research, 66:401-412.

2. **Ko, C.-P.**, Burton, H. and Bunge, R.P. (1976a) Synaptic transmission between rat spinal cord explants and dissociated superior cervical ganglion neurons in tissue culture. Brain Research, 117:437-460.

3. **Ko, C.-P.**, Burton, H., Johnson, M.I. and Bunge, R.P. (1976b) Synaptic transmission between rat superior cervical ganglion neurons in dissociated cell cultures. Brain Research, 117:461-486.

4. Roper, S. and **Ko, C.-P.** (1978a) Synaptic remodelling in the partially denervated parasympathetic ganglion in the heart of the frog. In Neuronal Plasticity (C. Cotman, ed.) New York: Raven Press. pp. 1-25.

5. Roper, S. and **Ko, C.-P.** (1978b) Impulse blockage in frog cardiac ganglion does not resemble partial denervation in changing synaptic organization. Science, 202:66-68.

6. **Ko, C.-P.** and Roper, S. (1978c) Disorganized and "excessive" reinnervation of frog cardiac ganglia. Nature, 274:286-288.

7. **Ko, C.-P.** (1981) Electrophysiological and freeze-fracture studies of changes following denervation at frog neuromuscular junctions. Journal of Physiology (London). 321:627-639.

8. **Ko, C.-P.** and Roper, S. (1982) Reinnervation of amphibian cardiac ganglion after complete or partial denervation. Journal of Physiology (London). 333:157-172.

9. Lynch, K. and **Ko, C.-P.** (1983) Presynaptic active zones at neuromuscular junction of larval frogs. Developmental Biology, 97:10-18.

10. **Ko, C.-P.** (1984) Regeneration of the active zones at the frog neuromuscular junction. Journal of Cell Biology, 98:1685-1695.

11. **Ko, C.-P.** (1985) Formation of the active zone at developing neuromuscular junctions in the larval and adult bullfrogs. Journal of Neurocytology, 14:487-512.

12. **Ko, C.-P.** and Propst, J.W. (1986a) Absence of sterol-specific complexes at active zones of degenerating and regeneration frog neuromuscular junctions. Journal of Neurocytology, 15:231-240.

13. **Ko, C.-P.** and Propst, J.W. (1986b) Freeze-fracture of physiologically identified neuromuscular junctions from single frog muscle fibers. Journal of Electron Microscopy Technique, 4:147-156.

14. Propst, J.W., Herrera, A.A. and **Ko, C.-P.** (1986) A comparison of active zone structure in frog neuromuscular junctions from two fast muscles with different synaptic efficacy. Journal of Neurocytology, 15:525-534.

15. Propst, J.W. and **Ko, C.-P.** (1987) Correlations between active zone ultrastructure and synaptic function studied with freeze-fracture of physiologically identified frog neuromuscular junctions. The Journal of Neuroscience, 7:3654-3664.

16. **Ko, C.-P.** (1987) A lectin, peanut agglutinin, as a probe for the extracellular matrix in living neuromuscular junctions. Journal of Neurocytology, 16:567-576.

17. Nystrom, R.R. and **Ko, C.-P.** (1988) Disruption of active zones in the frog neuromuscular junction treated with proteolytic enzymes. Journal of Neurocytology, 17:63-71.

18. **Ko, C.-P.** and Folsom, D.B. (1989) Induction of active zones at ectopic neuromuscular junctions in the frog. The Journal of Neuroscience, 9:3392-3399.

19. **Ko, C.-P.** and Folsom, D.B. (1990) Induction of synaptic extracellular matrix molecules at ectopic neuromuscular junctions. Developmental Brain Research, 53:121-124.

20. Somasekhar, T. and **Ko, C.-P.** (1991) Effects of denervation on the distribution of peanut agglutinin binding molecules in frog muscles. Journal of Neurocytology, 20:65-77.

21. Chen, L., Folsom, D.B. and **Ko, C.-P.** (1991) The remodelling of synaptic extracellular matrix and its dynamic relationship with nerve terminals at living frog neuromuscular junctions. The Journal of Neuroscience, 11:2920-2930.

22. **Ko, C.-P.** (1991) Peanut agglutinin as a probe for studying remodeling and differentiation of synaptic extracellular matrix at the frog neuromuscular junction. In Plasticity of Motoneuronal Connections (Ed. A. Wernig) Restorative Neurology. 5: 51-63. Elsevier, Amsterdam.

23. Chen, L. and **Ko, C.-P.** (1994) Extension of synaptic extracellular matrix during nerve terminal sprouting in living frog neuromuscular junctions. The Journal of Neuroscience, 14: 796-808.

24. Sugiura, Y., Woppmann, A., Miljanich, G. and **Ko, C.-P.** (1995) A novel omega-conopeptide for the presynaptic localization of calcium channels at the mammalian neuromuscular junction. Journal of Neurocytology, 24:15-27.

25. Bowersox, S., Miljanich, G.P., Sugiura, Y., Li, C.Z., Nadasdi, L., Hoffman, B.B., Ramachandran, J. and **Ko, C.-P.** (1995) Differential blockade of voltage-sensitive calcium channels in the mouse neuromuscular junction by novel omega-conopeptides and omega-agatoxin IVA. The Journal of Pharmacology and Experimental Therapeutics, 273:248-256.

26. **Ko, C.-P.** and Chen, L. (1996) Synaptic remodeling revealed by repeated, *in vivo* observations

and electron microscopy of identified frog neuromuscular junctions. The Journal of Neuroscience, 16:1780-1790.

27. Sugiura, Y. and **Ko, C.-P.** (1997) Novel modulatory effect of L-type calcium channels at newly-formed neuromuscular junctions. The Journal of Neuroscience, 17:1101-1111.

28. Astrow, S. H., Tyner, T. R., Nguyen, M. T. T. and **Ko, C.-P.** (1997) A Schwann cell matrix component of neuromuscular junctions and peripheral nerves. Journal of Neurocytology, 26:63-75.

29. Astrow, S. H., Qiang, H. and **Ko, C.-P.** (1998) Perisynaptic Schwann cells at the neuromuscular junctions revealed by a novel monoclonal antibody. Journal of Neurocytology, 27:667-681.

30. Koirala, S. and **Ko, C.-P.** (1998) A meeting report on the 6th annual USC Neuroscience Symposium on Neuron-glial interactions. CNS Drug Reviews, 4:380-383.

31. Koirala, S., Qiang H. and **Ko, C.-P.** (2000) Reciprocal interactions between perisynaptic Schwann cells and regenerating nerve terminals at the frog neuromuscular junction. Journal of Neurobiology, 44:343-360.

32. Sugiura, Y. and **Ko, C.-P.** (2000) PTX-sensitive and -insensitive synaptic modulation at the frog neuromuscular junction. NeuroReport 11:3017-3021.

33. Herrera, A.A., Qiang, H. and **Ko, C.-P.** (2000) The role of perisynaptic Schwann cells in development of neuromuscular junctions in the frog (*Xenopus laevis*). Journal of Neurobiology, 45:237-254.

34. **Ko, C.-P.** (2001) Neuromuscular System. in *International Encyclopedia of the Social and Behavioral Sciences*. Pp. 10595-10600. Edited by N. J. Smelser and P. B. Baltes. Pergamon, Oxford.

35. Yang, J.-F., Cao, G, Koirala, S., Reddy, L. V. and **Ko, C.-P.** (2001) Schwann cells express active agrin and enhance acetylcholine receptor aggregation on muscle fibers. The Journal of Neuroscience, 21:9572-9584.

36. Brandon, E. P., Lin, W., D'Amour, K. A., Pizzo, D. P., Dominguez, B., Sugiura, Y., Thode, S., **Ko, C.-P.**, Thal, L. J., Gage, F. H., and Lee, K.-F. (2003) Aberrant patterning of neuromuscular synapses in choline acetyltransferase deficient mice. The Journal of Neuroscience, 23:539-549.

37. Peng, H. B., Yang, J.-F., Dai, Z., Lee, C. W., Hung, H. W., Feng, H. Z., and **Ko, C.-P.** (2003)

Differential effects of neurotrophins and Schwann cell-derived signals on neuronal survival/growth and synaptogenesis. The Journal of Neuroscience, 23:5050-5060.

38. Reddy, L. V., Koirala, S., Sugiura, Y., Herrera, A. A., and **Ko, C.-P.** (2003) Glial cells maintain synaptic structure and function and promote development of the neuromuscular junction in vivo. Neuron, 40:563-580. (Recommended by *Faculty of 1000 Biology*)

39. **Ko, C.-P.** and Thompson, W. J. (2003) Preface to the special issue on The Neuromuscular Junction. Journal of Neurocytology, 32: 423-424. We edited the special issue (pp. 421- 1037) in tribute to Sir Bernard Katz.

40. Koirala, S., Reddy, L.V., and **Ko, C.-P.** (2003) Roles of glial cells in the formation, function, and maintenance of the neuromuscular junction. Journal of Neurocytology, 32:987-1002.

41. Corfas, G., Velardez, M. O., **Ko, C.-P**., Ratner, N., and Peles, E. (2004) Mechanisms and roles of axon-Schwann cell interactions. The Journal of Neuroscience, 24: 9250-9260.

42. Koirala, S. and **Ko, C.-P.** (2004) Pruning an axon piece by piece: a new mode of synapse elimination. Neuron, 44: 578-580.

43. Feng, Z., Koirala, S. and **Ko, C.-P.** (2005) Synapse-Glia Interactions at the Vertebrate Neuromuscular Junction. The Neuroscientist, 11:503-513.

44. **Ko, C.-P.**, Sugiura, Y., and Feng, Z. (2007) The biology of perisynaptic (terminal) Schwann cells. In "*The Biology of Schwann cells: development, differentiation and immunomodulation*" ed. by Armati, P. J., Cambridge University Press. Pp. 72-99.

45. Feng, Z. and **Ko, C.-P.** (2007) Neuronal-glia interactions at the vertebrate neuromuscular junction. Current Opinion in Pharmacology, 7:316-324.

46. Cao, G. and **Ko, C.-P.** (2007) Schwann cell-derived factors modulate synaptic activities at developing neuromuscular synapses. The Journal of Neuroscience, 27:6712-6722.

47. Feng, Z. and **Ko, C.-P.** (2008) The role of glial cells in the formation and maintenance of the neuromuscular junction. Annals of the New York Academy of Sciences, 1132:19-28.

48. **Ko, C.-P.** (2008) Do nerve terminal sprouts contribute to functional recovery from botulinum neurotoxin A? Journal of Physiology (Lond.), 586:3021.

49. Feng, Z. and **Ko, C.-P.** (2008) Schwann cells promote synaptogenesis at the neuromuscular junction via Transforming Growth Factor (TGF)-β1. The Journal of

Neuroscience, 28:9599-609. (Highlighted in *This Week in The Journal*, and Recommended by *Faculty of 1000 Biology*).

50. Feng, Z. and **Ko, C.-P.** (2009) Schwann Cells and Plasticity of the Neuromuscular Junction. In "Encyclopedia of Neuroscience" (L.R. Squire, Editor). Oxford: Academic Press. Vol. 8, pp. 491-496.

51. Feng, Z. and **Ko, C.-P.** (2009) Schwann Cells and Plasticity of the Neuromuscular Junction. In "Developmental Neurobiology" (G. Lemke, Editor). Academic Press. pp. 561-566.

52. An, M., Lin, W., Yang J., Dominguez, B., Padgett, D., Sugiura, Y., Aryal, P., Gould, T.W., Oppenheim, R.W., Hester, M.E., Kaspar, B.K., **Ko, C.-P**., and Lee, K.-F. (2010) Acetylcholine negatively regulates development of the neuromuscular junction through distinct cellular mechanisms. PNAS, 107: 10702-10707. (**Recommended by *Faculty of 1000 Biology***)

53. Ling, K.K.Y., Lin, M.-Y., Zingg, B., Feng, Z. and **Ko, C.-P.** (2010) Synaptic Defects in the Spinal and Neuromuscular Circuitry in a Mouse Model of Spinal Muscular Atrophy. PLoS ONE 5(11): e15457. doi:10.1371/journal.pone.0015457. (**Recommended by *Faculty of 1000 Biology***)

54. Yoo, Y.-E. and **Ko, C-.P.** (2011) Treatment with trichostatin A initiated after disease onset delays disease progression and increases survival in a mouse model of amyotrophic lateral sclerosis. Experimental Neurology, 231:147-159 (comment in Exp Neurol. 2012 Jan;233(1):112-7)

55. Ling, K. K. Y., Gibbs, R.M., Feng, Z., and **Ko, C.-P.** (2012) Severe neuromuscular denervation of clinically relevant muscles in a mouse model of spinal muscular atrophy. Human Molecular Genetics, 21:185-195; ddr453 first published online October 13, 2011.

56. Yoo, Y.-E. and **Ko, C-.P.** (2012) Dihydrotestosterone ameliorates degeneration in muscle, axons and motoneurons and improves motor function in a mouse model of amyotrophic lateral sclerosis. PLoS ONE, 7(5): e37258. doi:10.1371/journal.pone.0037258

57. Sahashi, K., Hua, Y., Ling, K. K. Y., Hung, G., Rigo, F., Horev, G., Masahisa, K., Gen, S., **Ko, C.-P.**, Bennett, C.F., and Krainer, A.R. (2012) TSUNAMI: an antisense method to phenocopy splicing-associated diseases in animals. Genes & Development, 15;26(16):1874-84.

58. Osborne, M., Cirillo, K., Feng, Z., El-Khodor, B., Gomez, D., McEwen, C., Beltran, J., Ghavami, A., Lin, M.-Y., Li, Y., Knowlton, W.M., McKemy, D.D., Martens, K., Davis, C., Doty, R., Wardwell, K., **Ko, C.-P**., Ramboz, S., Lutz, C. (2012) Characterization of behavioral and neuromuscular junction phenotypes in a novel allelic series of SMA mouse models. Human Molecular Genetics, Epub ahead of print on July 16. Oct 15;21(20):4431-47.

59. Lin, M.-Y., Rohan, J.G., Cai, H., Reim, K., **Ko, C.-P.*** and Chow, R. H.-P.* (2013) Complexin facilitates exocytosis and synchronizes vesicle release in two secretory model systems. (*equal co-corresponding authors) J. Physiology, 591:2463-2473. PMID:23401610

60. Cobb, M.S., Rose, F.F., Rindt, H., Glascock, J.J., Shababi, M., Miller, M.R., Osman, E.Y., Yen, P.-F., Martin, B.R., Wetz, M. J., Mazzasette, C., Feng, Z., **Ko, C.-P**. and Lorson, C.L. (2013) Development and characterization of an SMN2-based intermediate mouse model of spinal muscular atrophy. Human Molecular Genetics, 22:1843-1855. PMID:23390132

61. Van Meerbeke, J.P., Gibbs, R.M., Plasterer, H.L., Miao, W., Feng, Z., Lin, M.-Y., Rucki, A.A., Wee, C.D., Xia, B., Sharma, S., Jacques, V., Li, D.K., Pellizzoni, L., Rusche, J.R., **Ko, C.-P.**, and Sumner, C.J., (2013) The DcpS inhibitor RG3039 improves motor function in SMA mice. Human Molecular Genetics, 22:4074-4083. PMID:23727836.

62. Sahashi, K., Ling, K. K. Y., Hua, Y., Wilkinson, J.E., Nomakuchi, T., Rigo, F., Hung, G., Xu, D., Jiang, Y.-P., Lin, R.Z. **Ko, C.-P.**, Bennett, C.F., and Krainer, A.R. (2013) Pathological impact of SMN2 mis-splicing in adult SMA mice. EMBO Molecular Medicine, 5:1586-1601. PMID:24014320.

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