BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Louis F. Reichardt	Professor of Physiology and Biochem. & Biophysics, Investigator, Howard Hughes Medical

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Harvard University, Cambridge, MA	A.B.	1964	Biology
Stanford University, Stanford, CA	Ph.D.	1972	Biochemistry

Appointments: 1972-74, Res. Fellow, Univ. Geneva; 1974-77, Res. Fellow, Dept. Neurobiology, Harvard Med. Sch.; 1977-85, Asst. to Assoc. Prof.; 1985-pres., Prof., Physiology & Biochemistry & Biophysics, UCSF; 2004-pres., Jack D. & Deloris Lange Chair of Cell Physiology; 1986-2007, Investigator, HHMI; 1989-pres., Director, UCSF Neuroscience Program; 1998-pres. Director, Program in Biological Sciences, UCSF.

Professional Honors: National Merit Scholar, 1960-1964; Fulbright Scholar, 1964-1965; NSF Fellowship, 1964(declined); Fellow - Jane Coffin Childs, 1972-74; NRSA Postdoctoral Fellowship, 1974-1977; McKnight Scholar,1978-1981; Basil O'Conner Award, 1978-1980; Sloan Fellow, 1979-1983; Wills Award, 1980-1982; Guggenheim Fellow, 1985-86; Pres. Symp. lecturer, Ann. Mtg, Soc. Neurosci., l988; Grass lecturer, l988, l992; Javits Award, 1989-96; Fellow, AAAS, l992

Major Professional Service: Cold Spring Harbor: Co-organizer, Monoclonal Antibodies to Neural Antigens Workshop, 1980; Codirector, Molec. Biol. of the Nervous System course, 1986-94; Memberships: Musc. Dystr. Assn. Fellowship Rev. Subcomm., 1983-95; U.C.L.A. Molec. Neurobiol. Mtg. Advisory Board, 1984; Program Committee, Ann. Meetings, Soc. Neuroscience, 1986-89; Program Committee, Ann. Meeting, Amer. Soc. Cell Biol., 1991; Amer. Cancer Soc., Calif. Division, Fellowship Rev. Committee, 1989-92; N.S F. Advisory Panel, Developmental Neuroscience, 1986; N.I.H. Cell Biol. Physiol. I Study Section, 1987-91; NINDS. Program Project Review B Study Section, 1995-97; Internal Review Group, MCDN study sections, CSR, NIH, 1996-99; Scientific Adv. Boards: ALS Assn, 1995-2001; Univ. Alaska SNRP, 2000-present; Myelin Repair Foundation, 2003-present; Editorial Boards: J. Neuroscience, 1986-89 & 1996-97; Molec.Brain Res., 1986-present; Mol. Cell. Neurosci., 1985-present; J. Cell Biol., 1987-present (also Editor, 1998-present; Reviews Editor, 2000-present); Cell Adhesion & Comm., 1993-2002 (also Assoc. Editor); Curr. Op. Neurobiology, 1990-2000; Neuron, 1995-present (also Founding Editor, 1987-94); Bioessays Correspondent, 1984-86; Gordon Conferences: Cell Adhesion, co-chair 1991, chair 1993; Basement Membranes, co-chair 1998, chair 2000; Neurotrophins, chair 1999. Fibronectin, integrins & related molecules, co-chair 2003, chair 2005.

Selected Recent Reviews:

Huang, E.J. and Reichardt, L.F. (2001) Neurotrophins: roles in neuronal development and function. Ann. Rev. Neurosci. 24: 677-736.

Huang, E.J. and Reichardt,L.F. (2003) Trk receptors: roles in neuronal development and function. Ann. Rev. Biochem.72: 609-642.

Selected Recent Peer Reviewed Publications (27 of 146 total).

Patapoutian, A., Backus, C., Kispert, A., and Reichardt, L.F. (1999) Regulation of neurotrophin-3 expression by epithelial-mesenchymal interactions: The role of Wnt factors. Science, 283: 1180-1183.

Xu, B., Zang, K., Ruff, N.L., Zhang, Y.A., McConnell, S.K., Stryker, M.P., and Reichardt, L.F. (2000) Cortical degeneration in the absence of neurotrophin signaling: Dendritic retraction and neuronal loss after removal of the receptor TrkB. Neuron 26: 233-245.

Kleiman, R.J., Tian, N., Krizah, D., Hwang, T.N., Copenhagen, D.R., and Reichardt, L.F. (2000) BDNF induced potentiation of spontaneous twitching in innervated myocytes requires calcium release from intracellular stores. J. Neurophysiol 84: 472-483.

Xu, B., Gottschalk, W., Chow, A., Wilson, R., Schnell, E., Zang, K., Wang, D., Nicoll, R.A., Lu, B., and Reichardt, L.F. (2000) The role of BDNF receptors in the mature hippocampus: Modulation of long term potentiation through a presynaptic mechanism. J. Neurosci. 20: 6888-6897.

Kim, W.-Y., Fritzsch, B., Serls, A., Bakel, L.A., Huang, E.J., Reichardt, L.F., Barth, D.S., and Lee, J.E. (2001) NeuroD-null mice are deaf due to a severe loss of the inner ear sensory neurons during development. Development. 128: 417-426.

Mischel, P.S., Smith, S.G., Vining, E.R., Valletta, J.S., Mobley, W.C. and Reichardt, L.F. (2001) The

extracellular domain of p75NTR is necessary to inhibit neurotrophin-3 signaling through TrkA. J. Biol. Chem. 276: 11294-301.
Karlsson, M., Mayordomo, R., Reichardt, L.F., Catsicas, S., Karten, H.J., and Hallbook, F. (2001) Nerve growth factor is expressed by postmitotic avian retinal horizontal cells and supports their survival during development in an autocrine mode of action. Development 128: 471-479.
Huang, E.J, Liu, W., Fritzsch, B., Bianchi, L.M. Reichardt, L.F., and Xiang, M. (2000). Brn-3a is a transcriptional regulator of soma size, target field innervation and axon pathfinding of inner ear sensory neurons. Development 128: In press.
Giehl, K.M., Röhrig, S., Bonatz, H., Gutjahr, M., Leiner, B., Bartke, I., Yan, Q., Reichardt, L.F., Backus, C., Welcher, A.A., Dethleffsen, K., Mestres, P., and Meyer, M. (2001) Endogenous brain-derived neurotrophic factor and neurotrophin-3 antagonistically regulate survival of axotomized corticospinal neurons in vivo. J.Neuroscience 21: 3492-3502.
Fariñas, I., Jones, K.R., Tessarollo, L., Vigers, A.J., Huang, E., de Caprona, D.C., Reichardt, L.F., and Fritzsch, B. (2000) Spatial shaping of cochlear innervation by temporally-regulated neurotrophin expression. J. Neuroscience. In press.
Brandenberger, R., Schmidt, A., Linton, J., Wang, D., Denda, S., Müller, U., and Reichardt, L.F. (2001) Identification and Characterization of a Novel ECM Protein Nephronectin that is Associated with Integrin α8β1 in the Embryonic Kidney. J. Cell Biol. 154: 447-458.
Rohrer B., LaVail M.M., Jones K.R., and Reichardt L.F. 2001. Neurotrophin Receptor TrkB activation is not required for the postnatal survival of retinal ganglion cells in vivo. Exp Neurol 172:81-91.
Feltri, M. L., Graus Porta, D., Previtali, S. C., Nodari, A., Migliavacca, B., Cassetti, A., Littlewood-Evans, A., Reichardt, L. F., Messing, A., Quattrini, A., Mueller, U. and Wrabetz, L. (2002). Conditional disruption of beta 1 integrin in Schwann cells impedes interactions with axons. J Cell Biol 156, 199-209.
Rico, B., Xu, B., and Reichardt, L.F. (2002) TrkB receptor signaling is required for the establishment of GABAergic synapses in the cerebellum. Nature Neuroscience 5: 225-233.
Zhu, J., Motejlek, K., Wang, D., Zang, K., Schmidt, A. and Reichardt, L.F. (2002) β8 integrins are required for vascular morphogenesis in mouse embryos. Development 129, 2891-2903.
Cronk, K.M., Wilkinson, G.A., Grimes, R., Wheeler, E.F., Jhaveri, S., Fundin, B.T., Silos-Santiago, I., Tessarollo, L., Reichardt, L.F. and Rice, F.L. (2002) Diverse dependencies of developing Merkel innervation on the trkA and both full-length and truncated isoforms of trkC. Development 129:3739-3750.
Fünfschilling, U. and Reichardt, L.F. 2002. Cre-mediated recombination in rhombic lip derivatives. Genesis 33: 160-169.
Jullien, J., Guli, V., Reichardt, L.F., and Rudkin, B.B. 2002. Molecular kinetics of NGF receptor trafficking and activation. J. Biol. Chem. 277:38700-708.
Rohrer, B., Matthes, M., LaVail, M.M. and Reichardt, L.F. 2002. lack of p75 does not protect photoreceptors from light induced cell death. Exper. Eye Res. 76: 125-129.
Jullien, J., Guili, V., Ibanez, C., Reichardt, L.F. and Rudkin, B.B. 2002. Trafficking of TrkA-GFP chimera during NGF-induced differentiation. J. Biol. Chem. 278: 8706-16.
Tran, P.V., Lee, M.B., Marin, O., Xu, B., Jones, K.R., Reichardt, L.F. Rubenstein, J.R. and Ingraham, H.A. (2003) Requirement of the orphan nuclear receptor SF-1 in terminal differentiation of ventral medial hypothalamic neurons. Molec. Cell. Neurosci.22: 441-453.
Xu, B., Goulding, E., Zang, K., Cepoi, D., Cone, R.D., Jones, K.R., Tecott, L.H., and Reichardt, L.F. (2003). Brain-derived Neurotrophic Factor is a Component of the Melanocortin-4 Receptor Pathway in the Regulation of Energy Balance. Nature Neuroscience 6: 736-742.
Elul, T.M., Kimes, N.E., Kohwi, M., and Reichardt, L.F. (2003) Amino-and carboxyl-terminal domains of beta catenin initiate and shape axon arbors in retinal ganglion cells in vivo. J. Neuroscience 23:6567-6575.
Beggs, H.E., Schahin-Reed, D., Sretavan, D., Zang, K., Jones, K.R. Goebbels, S., Nave, K.-A., and Reichardt, L.F. (2003) FAK deficiency in cells contributing to the basal lamina results in cortical abnormalities resembling congenital muscular dystrophies. Neuron 40: 501-514.
Bamji, S.X., Shimazu, K., Kimes, N., Huelsken, J., Birchmeier, W., Lu, B., and Reichardt, L.F. (2003) Role of β-catenin in synaptic vesicle localization and presynaptic assembly. Neuron. 40: 719-731.
Paredes, A., Romero, C., Disen, G.A., DeChiara, T.M., Reichardt, L.F., Cornea, A., Ojeda, S.R. and Xu, B. (2004) TrkB receptors are required for follicular growth and oocyte survival in the mammalian ovary. Dev. Biol. 267: 430-449.
Blaess, S., Graus-Porta, D., Littlewood-Evans, A., Senften, M., Guo, H., Li, Y., Reichardt, L.F. and Müller, U. (2003) Defective Granule Cell Precursor Proliferation in the Absence of β1-Class Integrins. J. Neuroscience In press.

Other Support

ACTIVE

PO1 NS16033- Louis F. Reichardt, PI 7/01/03-6/30/08 NINDS
Title: Function and Development of the Synapse. 6 projects by 6 different investigators
We investigate the structure and function of synapses using a combination of molecular, biophysical, immunological and cell biological techniques.

PO1 NS16033- Louis F. Reichardt, PI Project 4: 7/01/03-6/30/08
Title: Functions of Neurotrophins & Trk receptors in synapse formation in the CNS.
This project will examine signaling pathways that mediate neurotrophin effects on synapse formation, primarily using the primary visual projection in Xenopus, but also examining ocular dominance column formation in mice.

PO1 NS16033- Louis F. Reichardt, PI Core A 7/1/03-06/30/08
Prepare transgenic animals by male pronuclear injection and ES cell mutagenesis for members of Program Project Grant (5 investigators total).

R01 NS19090, Louis F. Reichardt, PI 12/01/84-11/30/05 NINDS
Title: Integrin Signaling in Nervous System
This grant supports work on integrin beta1, integrin beta8 and focal adhesion kinase functions in the developing nervous system.

1R01DK6433-01, Louis F. Reichardt, PI 12/01/03-11/30/07 NIDDK
Title: Nephronectin-dependent signaling in kidney development
To understand the role of a novel extracellular matrix protein name nephronectin in kidney development.

Project Number: none Louis F. Reichardt, PI 9/1/03-8/31/04 Howard Hughes Medical Institute
Title: None The HHMI supports transgenic studies on neurotrophin signaling roles in sensory neuron development and on the roles of cadherins, β-catenin, and p120ctn in regulating synapse formation and function in the CNS.

T32 GM07449 , Louis F. Reichardt, PI 07/01/02-06/30/07
NIGMS
Title: Predoctoral Training in Neuroscience
The grant provides training support for 11 predoctoral fellows to work with members of the UCSF Neuroscience Program (65 total faculty; ca 68 total students).

PENDING

none