

Curriculum Vitae

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Education:

University of California, Berkeley	A.B.	1966	Psychology
University of California, Los Angeles	M.A.	1967	Physiological Psychology
University of California, Los Angeles	Ph.D.	1970	Physiological Psychology
University of California, Irvine	Postdoc	1970-1972	Psychobiology

Employment

1972-1973 Instructor in Physiology, Department of Physiology, School of Medicine and Research Scientist, Biological Sciences Research Center, Child Development Institute, University of North Carolina, Chapel Hill, North Carolina

1973- 1979 Assistant Professor in Physiology, Department of Physiology, School of Medicine and Research Scientist, Biological Sciences Research Center, Child Development Institute, University of North Carolina, Chapel Hill, North Carolina

1979- 1987 Associate Professor in Physiology, Department of Physiology, School of Medicine and Research Scientist, Biological Sciences Research Center, Child Development Institute, University of North Carolina, Chapel Hill, North Carolina

1998-2000 Associate Dean for Preclinical Education

1987-present Professor in Cell and Molecular Physiology, member of the Neuroscience Center and Curriculum in Neurobiology

Honors

A.B. with High Honors in Psychology, Phi Beta Kappa, 1966

Director, Medical Neurobiology Course, Winner Best Course Award, 1989-1996, 1998-1999, 2001

Freshman Basic Science Teaching Award, 1995, 1997

Hyman L. Battle Distinguished Excellence in Teaching Award in the Basic Sciences, 1995

University Service (Selected Current)

Chancellor's Advisory Committee (1998-2001, Chair 2000-2001)

Chancellor's Task Force on Appointment, Promotion, and Tenure (2001 – present, Co-Chair)

Health Sciences Advisory Committee (2000-2003, Chair)

National Service

Neurology B2 Study Section, 1992-1997 (Chair, 1995-1997)

CSR BDCN-2(2L) Study Section, 1997-2000 (ad hoc Chair, 2-3 times per year)

CSR BDCN-2(2L) Study Section, 2000-present (ad hoc member)

Advisory Board, for development of NIH-sponsored curriculum, "The Brain: Our Sense of Self,," BSCS (Colorado Springs), 2000-2002.

Ad hoc proposal reviewer for several organizations—e.g., Veteran's Administration, Alzheimer's Association, VolkswagenStiftung

Ad hoc reviewer for several scientific journals

Active Grants, Principal Investigator

Sensory Neuron Addition In Rat, NIH R01 NS37524, 1/1/99 - 1/31/03

Refereed Papers

Farel,P.B. (1971) Long-lasting habituation in spinal frogs. *Brain Res.*33:405-417.

Farel,P.B. (1971) Post-transectional hyperexcitability and centrally mediated response decrements in chronic spinal frog. *Physiol. Behav.* 7:529-533.

Jacobs,B.L. and Farel,P.B. (1971) Motivated behaviors produced by increased arousal in the presence of goal objects. *Physiol. Behav.*6:473-476.

Farel,P.B. and Buerger,A.A. (1972) Instrumental conditioning of leg position in chronic spinal frog: before and after sciatic section. *Brain Res.*47:345-351.

Farel,P.B. and Krasne,F.B. (1972) Maintenance of habituation by infrequent stimulation. *Physiol. Behav.*8:783-785.

Farel,P.B. and Thompson,R.F. (1972) Habituation and dishabituation to dorsal root stimulation in the isolated frog spinal cord. *Behav. Biol.* 7:37-45.

Farel,P.B., Glanzman,D.L., and Thompson,R.F. (1973) Habituation of a monosynaptic response in vertebrate central nervous system: lateral column-motoneuron pathway in isolated frog spinal cord. *J. Neurophysiol.* 36:1117-1130.

Farel,P.B. (1974) Dual processes control response habituation across a single synapse. *Brain Res.*72:323-327.

Farel,P.B. (1976) Plasticity of a monosynaptic response in isolated frog spinal cords: habituation and persistent potentiation. *Advances in Psychobiology* 3:273-299.

Farel,P.B. and Thompson,R.F. (1976) Habituation of a monosynaptic response in frog spinal cord: evidence for a presynaptic mechanism. *J. Neurophysiol.* 39:661-666.

Farel,P.B. and Mclean,J.G. (1976) Behavioral changes in chronic spinal frog. *Brain Res.*106:418-422.

Farel,P.B. (1977) Modulation of response threshold in frog spinal cord: dependence upon descending influences. *Behav. Biol.* 20:507-511.

- Farel,P.B. (1978) Reflex activity of regenerating frog spinal motoneurons. *Brain Res.*158:331-341.
- McIlwain,D.L. and Farel,P.B. (1979) Initiation and time course of mitosis of non-neuronal cells after spinal motoneuron axotomy. *Brain Res.*178:519-528.
- Farel,P.B. and Bemelmans,S.E. (1980) Retrograde labeling of migrating spinal motoneurons in bullfrog larvae. *Neurosci.Lett.* 18:133-136.
- Farel,P.B. (1980) Selective synaptic changes following spinal motoneuron axotomy. *Brain Res.*189:67-77.
- Stehouwer,D.J. and Farel,P.B. (1980) Central and peripheral controls of swimming in anuran larvae. *Brain Res.* 195:323-335.
- Chu-Wang,I.-W., Oppenheim,R.W., and Farel,P.B. (1981) Ultrastructure of migrating spinal motoneurons in anuran larvae. *Brain Res.* 213:307-318.
- Stehouwer,D.J. and Farel,P.B. (1981) Sensory interactions with a central motor program in anuran larvae. *Brain Res.* 218:131-140.
- Forehand,C.J. and Farel,P.B. (1982) Anatomical and behavioral recovery from the effects of spinal cord transection: dependence on metamorphosis in anuran larvae. *J. Neurosci.* 2:654-52.
- Forehand,C.J. and Farel,P.B. (1982) Spinal cord development in anuran larvae: I. Primary and secondary neurons. *J. Comp. Neurol.* 209:386-394.
- Forehand,C.J. and Farel,P.B. (1982) Spinal cord development in anuran larvae: II. Ascending and descending pathways. *J. Comp. Neurol.*209:395-408.
- Farel,P.B. and McIlwain,D.L. (1983) Cholinergic enzyme activity in neurons of the developing anuran spinal cord. *Brain Res.*284:275-282.
- Stehouwer,D.J. and Farel,P.B. (1983) Development of hindlimb locomotor activity in the bullfrog (*Rana catesbeiana*) studied in vitro. *Science* 219:516-518.
- Stehouwer,D.J. and Farel,P.B. (1984) Development of hindlimb locomotor behavior in the frog. *Devel.Psychobiol.* 17:217-232.
- Farel,P.B. and Bemelmans,S.E. (1985) Specificity of motoneuron projection patterns during development of the bullfrog tadpole (*Rana catesbeiana*). *J. Comp. Neurol.*238:128-134.
- Mcclellan,A.D. and Farel,P.B. (1985) Pharmacological activation of locomotor patterns in larval and adult frog spinal cords. *Brain Res.*332:119-130.
- Stehouwer,D.J. and Farel,P.B. (1985) Development of locomotor mechanisms in the frog. *J.Neurophysiol.* 53:1453-1466.
- Farel,P.B. and Bemelmans,S.E. (1986) Restoration of neuromuscular specificity following ventral rhizotomy in the bullfrog tadpole, *Rana catesbeiana*. *J. Comp. Neurol.*254:125-132.
- Farel,P.B. (1986) Specificity of neuromuscular connections during early development and following regeneration of motor axons in the bullfrog. *Neurochem. Pathol.* 5:187-203.
- Farel,P.B. (1987) Motoneuron number in the lumbar lateral motor column of larval and adult bullfrogs. *J. Comp. Neurol.*261:266-276.
- Lee,M.T. and Farel,P.B. (1988) Guidance of regenerating motor axons in larval and juvenile bullfrogs. *J.Neurosci.* 8:2430-2437.

- Farel,P.B. (1989) Naturally occurring cell death and differentiation of developing spinal motoneurons following axotomy. *J. Neurosci.* 9:2103-2113.
- Farel,P.B. and Wray,S.E. (1989) Regenerative specificity of motor axons when reinnervation is partially suppressed. *J. Neurobiol.* 20:69-80.
- Davis,G.R.J. and Farel,P.B. (1990) Mauthner cells maintain their lumbar projection in adult frog. *Neurosci. Lett.* 113:139-143.
- Davis,G.R., Jr. and Farel,P.B. (1990) Mauthner cells maintain their lumbar projection in adult frog. *Neurosci.Lett.* 113:139-143.
- Alles,A., Alley,K., Barrett,J.C., Buttyan,R., Columbano,A., Cope,F.O., Copelan,E.A., Duke,R.C., Farel,P.B., Gershenson,L.E., and et.al. (1991) Apoptosis: a general comment. *FASEB.J.* 5:2127-2128.
- Farel,P.B. and Wray,S.E. (1992) Neuromuscular specificity following cross-stage hindlimb transplantation [published erratum appears in *Exp Neurol* 1992 Jul;117(1):100-1]. *Exp. Neurol.* 116:180-188.
- Farel,P.B., St, and Wray,S.E. (1992) Neuron addition in the postmetamorphic frog. [Review] [43 refs]. *Exp. Gerontol.* 27:111-124.
- Farel,P.B. and Meeker,M.L. (1993) Developmental regulation of regenerative specificity in the bullfrog. [Review] [25 refs]. *Brain Res.Bull.* 30:483-490.
- Farel,P.B., Wray,S.E., and Meeker,M.L. (1993) Size-related increase in motoneuron number: evidence for late differentiation. *Brain Res.Dev. Brain Res.* 71:169-179.
- Meeker,M.L. and Farel,P.B. (1993) Coincidence of Schwann cell-derived basal lamina development and loss of regenerative specificity of spinal motoneurons. *J.Comp.Neurol.* 329:257-268.
- St.Wecker,P.G. and Farel,P.B. (1994) Hindlimb sensory neuron number increases with body size. *J.Comp.Neurol.* 342:430-438.
- St Wecker,P.G., Baek,J.K., and Farel,P.B. (1995) Principal neurons of the lumbar sympathetic ganglia increase in number with body size. *J. Comp. Neurol.*357:117-123.
- Popken,G.J. and Farel,P.B. (1996) Reliability and validity of the physical disector method for estimating neuron number. *J. Neurobiol.* 31:166-174.
- Meeker,M.L. and Farel,P.B. (1997) Neuron addition during growth of the postmetamorphic bullfrog: Sensory neuron and axon number. *J. Comp. Neurol.*389:569-576.
- Popken,G.J. and Farel,P.B. (1997) Sensory neuron number in neonatal and adult rats estimated by means of stereologic and profile-based methods. *J. Comp. Neurol.*386:8-15.
- Farel,P.B. and Boyer,A. (1999) Transient effects of nerve injury on estimates of sensory neuron number in juvenile bullfrog. *J. Comp. Neurol.*410:171-177.
- Farel, P.B. and McIlwain, D. L. (2000) Neuron addition and enlargement in juvenile and adult animals. *Brain Res. Bull.* 53: 537-546.
- Berg, J. S. and Farel, P.B. (2000) Developmental regulation of sensory neuron number and limb innervation in the mouse. *Dev. Brain Res.* 125: 21-30.
- Farel, P.B. (2001) Neuron addition and neurogenesis are not interchangeable terms. *Anat Rec.*265:159.
- Farel, P.B. (Submitted) Sensory neuron addition in postnatal rat.