

CURRICULUM VITAE

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Education:

1984	B.A., St. John's University, Psychology
1986	M.A. UCLA, Behavioral Neuroscience
1988	Ph.D., UCLA, Behavioral Neuroscience
1989-1992	Postdoctoral Fellow, The Rockefeller University Neuroendocrinology

Professional Experience:

1993-1996	Assistant Professor, The Rockefeller University
1997-2000	Assistant Professor, Princeton University
1997-present	Adjunct Professor, The Rockefeller University
2000	Professor, Princeton University

Awards and Honors:

1989-1991	NRSA Individual postdoctoral fellowship
1991-1992	WinstonTri-Institutional (Rockefeller, Cornell, Sloan-Kettering) fellowship
1992-1993	American Paralysis Association fellowship
1993-1994	NIMH RO3 small grant
1994-1996	NARSAD Young Investigator Award
1994-1999	NIMH FIRST award
2000	National Academy of Sciences Troland Award
2006	NARSAD Distinguished Investigator Award

Advisory Committees:

1998 – 2000	NSF Learning and Intelligence Systems KDI-LIS Review Committee
2000-2001	Governor's Council on Autism Grants Review Panel
2000-2004	ad hoc reviewer for NIH
2002-2006,	LAM NIH study section

Editorial boards:

Journal of Neuroscience
 Neurobiology of Learning and Memory
 Biological Psychiatry

Research articles:

Gould E, Butcher LL (1987) Transient expression of choline acetyltransferase-like immunoreactivity in Purkinje cells of the developing rat cerebellum. *Develop Brain Res* 431:303-306.

- Gould E, Butcher LL (1989) Developing cholinergic basal forebrain neurons are sensitive to thyroid hormone. *J Neurosci* 9:3347-3358.
- Gould E, Farris TW, Butcher LL (1989) Basal forebrain neurons undergo somatal and dendritic remodeling during postnatal development: a single-section Golgi and choline acetyltransferase analysis. *Develop Brain Res* 46:297-302.
- Gould E, Woolf NJ, Butcher LL (1989) Cholinergic projections to the substantia nigra from the pedunculo-pontine and laterodorsal tegmental nuclei. *Neuroscience* 28:611-623.
- Woolf NJ, Gould E, Butcher LL (1989) Nerve growth factor receptor is associated with cholinergic neurons of the basal forebrain but not the pontomesencephalon. *Neuroscience* 30:143-152.
- Woolley CS, Gould E, Frankfurt M, McEwen BS (1990) Naturally occurring fluctuation in dendritic spine density on adult hippocampal pyramidal neurons. *J Neurosci* 10:4035-4039.
- Woolley CS, Gould E, McEwen BS (1990) Exposure to excess glucocorticoids alters dendritic morphology of adult hippocampal pyramidal neurons. *Brain Res* 531:225-231.
- Frankfurt M, Gould E, Woolley CS, McEwen BS (1990) Gonadal steroids modify dendritic spine density in ventromedial hypothalamic neurons: a Golgi study in the adult rat. *Neuroendocrinology* 51:530-535.
- Gould E, Woolley CS, Frankfurt M, McEwen BS (1990) Gonadal steroids regulate dendritic spine density in hippocampal pyramidal cells in adulthood. *J Neurosci* 10:1286-1291.
- Gould E, Westlind-Danielsson A, Frankfurt M, McEwen BS (1990) Sex differences and thyroid hormone sensitivity of hippocampal pyramidal cells. *J Neurosci* 10:996-1003.
- Gould E, Frankfurt M, Westlind-Danielsson A, McEwen BS (1990) Developing forebrain astrocytes are sensitive to thyroid hormone. *Glia* 3:283-292.
- Gould E, Woolley CS, McEwen BS (1990) Short-term glucocorticoid manipulations affect neuronal morphology and survival in the adult dentate gyrus. *Neuroscience* 37:367-375.
- Gould, E., C.S. Woolley and B.S. McEwen (1991) Adrenal steroids regulate postnatal development of the rat dentate gyrus I. Effects of glucocorticoids on cell death. *J. Comp. Neurol.* 313:479-485.
- Gould, E., C.S. Woolley, H.A. Cameron, D.C. Daniels and B.S. McEwen (1991) Adrenal steroids regulate postnatal development of the rat dentate gyrus: II. Effects of glucocorticoids and mineralocorticoids on cell birth. *J. Comp. Neurol.* 313:486-493.
- Woolley CS, Gould E, Sakai RR, Spencer RL, McEwen BS (1991) Effects of aldosterone or RU28362 treatment on adrenalectomy-induced cell death in the dentate gyrus of the adult rat. *Brain Res* 554:312-315

- Gould E, Woolley CS, McEwen BS (1991) Naturally occurring cell death in the developing dentate gyrus of the rat. *J Comp Neurol* 304:408-418.
- Westlind-Danielsson A, Gould E, McEwen BS (1991) Thyroid hormone causes sexually distinct neurochemical and morphological alterations in rat septal-diagonal band neurons. *J Neurochem* 56:119-128.
- Watanabe Y, Gould E, Cameron HA, Daniels DC, McEwen BS (1992) Phenytoin prevents stress- and corticosterone-induced atrophy of CA3 pyramidal neurons. *Hippocampus* 2:431-435.
- Gould E, Cameron HA, Daniels DC, Woolley CS, McEwen BS (1992) Adrenal hormones suppress cell division in the adult rat dentate gyrus. *J Neurosci* 12:3642-3650.
- Watanabe Y, Gould E, McEwen BS (1992) Stress induces atrophy of apical dendrites of hippocampal CA3 pyramidal neurons. *Brain Res* 588:341-345.
- Gould E., D.C. Daniels, H.A. Cameron and B.S. McEwen (1992) Expression of adrenal steroid receptors by newly born cells and pyknotic cells in the dentate gyrus of the postnatal rat. *Molec. Cell. Neurosci.* 3:44-48.
- Cameron HA, Woolley CS, McEwen BS, Gould E (1993) Differentiation of newly born neurons and glia in the dentate gyrus of the adult rat. *Neuroscience* 56:337-344.
- Cameron HA, Woolley CS, Gould E (1993) Adrenal steroid receptor immunoreactivity in cells born in the adult rat dentate gyrus. *Brain Res* 611:342-346.
- Cameron HA, Gould E (1994) Adult neurogenesis is regulated by adrenal steroids in the dentate gyrus. *Neuroscience* 61:203-209.
- Gould E, Cameron HA, McEwen BS (1994) Blockade of NMDA receptors increases cell death and birth in the developing rat dentate gyrus. *J Comp Neurol* 340:551-565.
- Cameron HA, McEwen BS, Gould E (1995) Regulation of adult neurogenesis by excitatory input and NMDA receptor activation in the dentate gyrus. *J Neurosci* 15:4687-4692.
- Cameron HA, Gould E (1996) Distinct populations of cells in the adult dentate gyrus undergo mitosis or apoptosis in response to adrenalectomy. *J Comp Neurol* 369:56-63.
- Gould E, Cameron HA (1997) Early NMDA receptor blockade impairs defensive behavior and increases cell proliferation in the dentate gyrus of developing rats. *Behav Neurosci* 111:49-56.
- Gould E, Tanapat P, Cameron HA (1997) Adrenal steroids suppress granule cell death in the developing dentate gyrus through an NMDA receptor-dependent mechanism. *Develop Brain Res* 103:91-93.
- Gould E, Tanapat P (1997) Lesion-induced proliferation of neuronal progenitors in the dentate gyrus of the adult rat. *Neuroscience* 80:427-436.

Gould E, Tanapat P, McEwen BS (1997) Activation of the type 2 adrenal steroid receptor can rescue granule cells from death during development. *Develop Brain Res* 101:265-268.

Gould E, McEwen BS, Tanapat P, Galea LA, Fuchs E (1997) Neurogenesis in the dentate gyrus of the adult tree shrew is regulated by psychosocial stress and NMDA receptor activation. *J Neurosci* 17:2492-2498.

Tanapat P, Galea LA, Gould E (1998) Stress inhibits the proliferation of granule cell precursors in the developing dentate gyrus. *Int J Dev Neurosci* 16:235-239.

Gould E, Tanapat P, McEwen BS, Flugge G, Fuchs E (1998) Proliferation of granule cell precursors in the dentate gyrus of adult monkeys is diminished by stress. *Proc Natl Acad Sci U S A* 95:3168-3171.

Cameron HA, Tanapat P, Gould E (1998) Adrenal steroids and N-methyl-D-aspartate receptor activation regulate neurogenesis in the dentate gyrus of adult rats through a common pathway. *Neuroscience* 82:349-354.

Hastings NB, Gould E (1999) Rapid extension of axons into the CA3 region by adult-generated granule cells. *J Comp Neurol* 413:146-154.

Tanapat P, Hastings NB, Reeves AJ, Gould E (1999) Estrogen stimulates a transient increase in the number of new neurons in the dentate gyrus of the adult female rat. *J Neurosci* 19:5792-5801.

Gould E, Reeves AJ, Fallah M, Tanapat P, Gross CG, Fuchs E (1999) Hippocampal neurogenesis in adult Old World primates. *Proc Natl Acad Sci U S A* 96:5263-5267.

Gould E, Beylin A, Tanapat P, Reeves A, Shors TJ (1999) Learning enhances adult neurogenesis in the hippocampal formation. *Nature Neurosci* 2:260-265.

Gould E, Reeve AJ, Graziano MSA and Gross CG (1999) Neurogenesis in the neocortex of adult primates. *Science* 286: 548-552.

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Tanapat P, Hastings NB, Rydel TA, Galea LA, Gould E. (2001) Exposure to fox odor inhibits cell proliferation in the hippocampus of adult rats via an adrenal hormone-dependent mechanism. *J Comp Neurol*. 437:496-504.

Gould E, Vail N, Wagers M, Gross CG (2001) Adult-generated hippocampal and neocortical neurons in macaques have a transient existence. *Proc Natl Acad Sci U S A*.98:10910-7.

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Shors TJ, Townsend DA, Zhao M, Kozorovitskiy Y, Gould E (2002) Neurogenesis may relate to some but not all types of hippocampal-dependent learning *Hippocampus* 12: 578-584

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Mirescu C, Peters JD, Gould E. (2004) Early life experience alters response of adult neurogenesis to stress. *Nat Neurosci*. 7:841-846.

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Leuner B, Waddell J, Gould E, Shors TJ (in press) Temporal Discontiguity is Neither Necessary nor Sufficient for Learning-Induced Effects on Adult Neurogenesis *J Neurosci*

Review Articles, Book Chapters, News & Views:

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McEwen BS, Coirini H, Danielsson A, Frankfurt M, Gould E, Mendelson S, Schumacher M, Segarra A, Woolley C (1991) Steroid and thyroid hormones modulate a changing brain. *J Steroid Biochem Mol Biol* 40:1-14.

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- McEwen BS, Coirini H, Westlind-Danielsson A, Frankfurt M, Gould E, Schumacher M, Woolley C (1991) Steroid hormones as mediators of neural plasticity. *J Steroid Biochem Mol Biol* 39:223-232.
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- McEwen BS, Cameron H, Chao HM, Gould E, Magarinos AM, Watanabe Y, Woolley CS (1993) Adrenal steroids and plasticity of hippocampal neurons: toward an understanding of underlying cellular and molecular mechanisms. *Cell Mol Neurobiol* 13:457-482.
- Gould, E. and B.S. McEwen (1993) Neuronal birth and death. *Current Opinion Neurobiology* 3:676-682.
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- Woolley, C.S. and E. Gould (1994) Steroid action on neuronal structure. In: *Neurobiology of Steroids, Methods in Neurosciences* vol. 22. Eds: E.R. de Kloet and W. Sutanto, Academic Press, pp.383-402.
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- McEwen BS, Gould E, Orchinik M, Weiland NG, Woolley CS (1995) Oestrogens and the structural and functional plasticity of neurons: implications for memory, ageing and neurodegenerative processes. *Ciba Found Symp* 191:52-66.
- McEwen BS, Albeck D, Cameron H, Chao HM, Gould E, Hastings N, Kuroda Y, Luine V, Magarinos AM, McKittrick CR (1995) Stress and the brain: a paradoxical role for adrenal steroids. *Vitam Horm* 51:371-402.
- Cameron, H.A. and E. Gould (1996) The control of neuronal birth and death. In: *Receptor Dynamics and Neural Development*. Ed: C. A. Shaw, CRC Press. pp.141-158.
- Gould, E. and H.A. Cameron (1996) The regulation of neuronal birth, migration and death in the rat dentate gyrus. *Develop. Neurosci.* 18: 22-35.
- Gould, E., P. Tanapat, N.B. Hastings, and T.J. Shors (1999) Neurogenesis in adulthood: a possible role in learning. *Trends in Cognitive Sciences* 3:186-191.

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Tanapat P, N.B. Hastings and E. Gould (2002) Adult neurogenesis in the mammalian brain. In: *Hormones, Brain and Behavior* Ed: P.W. Pfaff, A.P. Arnold, A.M.Etgen, S.E. Fahrback and R.T. Rubin., Academic Press

Nestler EJ, Gould E, Manji H, Buncan M, Duman RS, Greshenfeld HK, Hen R, Koester S, Lederhendler I, Meaney M, Robbins T, Winsky L, Zalcman S. (2002) Preclinical models: status of basic research in depression. *Biol Psychiatry*. 52:503-528.

Hastings NB, Gould E. (2003) Neurons inhibit neurogenesis. *Nat Med* 9:264-266.

Kozorovitskiy Y, Gould E.(2003) Stem cell fusion in the brain. *Nat Cell Biol*. 5:952-954.

Gould E (2004) Stress, deprivation and adult neurogenesis. In: *The Cognitive Neurosciences*, Ed: M. Gazzaniga, MIT Press.

Mirescu C, Gould E. (2004) From neurotoxin to neurotrophin. *Nat Neurosci*. 7:899-900.

Leuner B, Gould E, Shors TJ. (2006) Is there a link between adult neurogenesis and learning? *Hippocampus*. 16:216-24.

Mirescu C, Gould E. (2006) Stress and adult neurogenesis. *Hippocampus*. 16:233-8.

Gould E (2007) Structural Plasticity. In: *The Hippocampus Book* Ed: Andersen P, Morris, J, O'Keefe J. Oxford Univ Press 321-342