

# ***CURRICULUM VITAE***

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## **Personal data**

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Bioengineering and Science Building  
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Dallas, TX  
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Place of Birth: Mexico City, Mexico

Languages: Spanish, English, French, Italian

Citizenship: US Citizen

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## **Education**

1978 B.Sc. Psychophysiology. Anahuac University, Mexico.

1982 M.Sc. Physiology and Biophysics. Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico.

1991 Ph.D. Physiology and Biophysics. Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico.

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## **Employment and Teaching Experience**

1978 Lecturer in Physiology of emotion and motivation, Anahuac University, Mexico.

1978-1980 Instructor in Neuroanatomy lab, Anahuac University, Mexico.

1978-1980 Lecturer in Neuroanatomy, Anahuac University, Mexico.

1979-1982 Master's Degree Fellowship, CONACyT, Mexico.

1981 Lecturer of Memory Physiology. Anahuac University, Mexico.

1981-1982 Teaching assistant in "Reflex organization of the spinal cord", Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico.

1981-1985 Instructor of Neurophysiology, Anahuac University, Mexico.

1982-1985 Neurophysiology division coordinator, Anahuac University, Mexico.

1986 Teaching assistant in "intra and intercellular communication", Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico

1986-1987 Pre doctoral fellowship, CONACyT, Mexico.

1987-1990 Guest Researcher, NAB, NIDR, NIH, Bethesda, MD.

1987-1990 Ph.D. candidate, Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico

1988-1990 Part-time employee, Pain Clinic, Neurobiology and Anesthesiology Branch, National Institute of Dental Research, NIH, Bethesda, MD.

1988-1990 Graduate training grant, Organization of American States and Searle Co.

1990-1996 Postdoctoral Associate, Department of Anatomy, The University of Iowa. Advisor: Dr. G.W. Van Hoesen.

1990-1996 Division of Cognitive Neuroscience, Department of Neurology, Neuroanatomy Division, Director: Dr. A.R. Damasio.

1991-1996 Teaching assistant of Medical Neuroscience Anatomy Lab, University of Iowa.

1992-1996 Lecturer in the Medical Neuroscience course, The University of Iowa.

1996-1997 Research Associate. Department of Anatomy and Neurobiology. The University of Maryland, Baltimore

1997-1999 Medical Neuroscience Instructor

1998-1999 DANA 612. Human Neuroanatomy for graduate students Instructor

1999-2000 NACS 651. The Neuroscience of Cognition Instructor

- 1997-1999 Assistant Professor. Department of Neurology. University of Maryland, Baltimore.
- 1999-2010 Research Associate (Assistant Professor). Department of Neurology. The University of Chicago
- 2004- Lecturer. Summer course Computational Neuroscience. University of Chicago.  
Lecturer. Limbic Anatomy. Psychiatry Residents. University of Chicago.
- 2010 Associate Professor. Department of Neurology. The University of Chicago.
- 2011 Associate Professor. Departments of Anatomy-Neurobiology and Neurology. University of California, Irvine School of Medicine.
- 2011 Lecturer: Medical Neuroscience. UC Irvine School of Medicine.
- 2013 Director: Medical Neuroscience. UC Irvine School of Medicine.
- 2017 Professor. Departments of Anatomy-Neurobiology and Neurology, UC Irvine Health School of Medicine.
- 2019 Professor. Behavioral and Brain Sciences. UT Dallas
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## **Membership in Professional Organizations**

Sociedad Mexicana de Ciencias Fisologicas

Society for Neuroscience

International Brain Research Organization

American Association for the Advancement of Science

Organization for Human Brain Mapping

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## Honors and Other Scientific Recognition

1978	<i>Summa Cum Laude</i> , B.Sc. Anahuac University, Mexico.
1979	Master's Degree Fellowship, CONACyT, Mexico.
1983	Special recognition for the best neurophysiology teaching lab practices. Sociedad Mexicana de Ciencias Fisiologicas, Mexico.
1988	Graduate training grant: Organization of American States.
1988	Graduate training grant: Searle Company.
2013	Distinguished Faculty Mentor Award, Institute for Clinical and Translational Sciences (ICTS), University of California, Irvine.
2014	Excellence in Teaching Award, UC Irvine School of Medicine.
2014	MVP Outstanding Service Award, Office of Educational Affairs, UC Irvine School of Medicine.
2014	Medalla Liderazgo (Leadership Medal), Anahuac, 50th year commemoration, Universidad Anahuac, Mexico.
2014	Theodore Von Karman Fellow, RWHT Aachen University, Germany.
2015	Member, Academy for Innovation in Medical Education (AIME), UC Irvine School of Medicine.

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## Scientific Reviewing

1993-	Neuroscience Letters
1994-	Journal of Neuropathology and Experimental Neurology
1998-	Journal of Neurochemistry and Cytochemistry
1999	The Wellcome Trust
2000-	Annals of Neurology
2001-	Journal of Geriatric Psychiatry and Neurology
	Journal of Neuroscience
	Cerebral Cortex
2005-	NeuroImage
	Human Brain Mapping
	Brain and Language
	Journal of Clinical Neurophysiology
	IEEE EMBS

	Neuroscience and Biobehavioral Reviews
	Brain
	Neuroscience
2009-	Experimental Brain Research
	Brain Research
	Neurorehabilitation and Neural Repair
2010-	Neurology
2011	Neurotechnology (NT) Study Section: Emerging Technologies and Training in Neurosciences (ETTN) ( <i>ad hoc</i> )
2013	Neuroscience and Ophthalmic Imaging Technologies (NOIT) Study Section ( <i>ad hoc</i> )
2015-	eNeuro
2018	Belgium's Alzheimer's Research Foundation

## UCI Service

Council on Education Policy (CEP) Committee (since October 2012); Vice-Chair (since October 2017-2019).

Department representative Senate Academy (September 2012-2014).

Medical Neuroscience Director (since August 2013-2019).

SOM Admissions Committee (since May 2014-2019).

Ad Hoc Legal Counsel Committee (1 year: 2016-2017).

Liaison Committee on Medical Education (LCME) Task Force (2015-2016).

## UT Dallas Service

### V. Professional service activities for 2020:

#### a. School committees

Department of Neuroscience PhD admissions committee Summer 2020- present

b. University committees

International Oversight Committee (IOC). Summer 2020 – present

UTD Committee on academic integrity October 2021- present

Promotion committee member on behalf of Greg Drussor PhD

Chair midprobationary review on behalf of Catherine Thorn PhD

## Bibliography

### a) Peer-reviewed Papers

Cardona A. and Rudomin, P. (1983) Activation of brain-stem serotonergic pathways decrease homosynaptic depression of monosynaptic responses of frog spinal motoneurons. *Brain Res.* 280:373-78.

[PMID: 6652498](#)

Solodkin, M., Cardona, A., and Corsi-Cabrera, M. (1985) Paradoxical sleep augmentation after imprinting in the domestic chick. *Physiol. Behav.* 35:343-48.

[PMID: 4070406](#)

Traub, R.J., Solodkin, A. and Ruda, M.A. (1989) Calcitonin gene-related peptide immunoreactivity in the cat lumbosacral spinal cord and the effects of multiple dorsal rhizotomies. *J. Comp. Neurol.* 287: 225-37.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=2794127](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=2794127)

Noguchi, K., Kowalski, K., Traub, R.J., Solodkin, A., Iadarola, M.J. and Ruda, M.A. (1991) Dynorphin expression and Fos-like immunoreactivity following inflammation induced hyperalgesia are colocalized in spinal cord neurons. *Mol. Brain Res.* 10:227-33.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=1679515](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=1679515)

Solodkin, A., Traub, R.J. and Gebhart, G.F. (1992) Unilateral hind paw inflammation produces bilateral increase in NADPH-diaphorase activity in the rat lumbar spinal cord. *Neuroscience* 51:495-99.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=1488110](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=1488110)

Van Hoesen G.W. and Solodkin A. (1993) Some modular features of temporal cortex in humans as revealed by pathological changes in Alzheimer's disease. *Cerebral Cortex* 3:465-75.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=7505138](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=7505138)

Traub, R.J., Solodkin, A. and Gebhart, G.F. (1994) NADPH-diaphorase histochemistry provides evidence for a bilateral, somatotopically inappropriate response to unilateral hindpaw inflammation in the rat. *Brain Res.* 647:113-23

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=8069693](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=8069693)

Van Hoesen G.W. and Solodkin A. (1994) Cellular and systems neuroanatomical changes in Alzheimer's disease. In: Calcium hypothesis of aging and dementia. Disterhoft J.F. and Khachaturian Z.S. (eds). *Proc NY Acad Sci (USA)* 747:12-35.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=7847666](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=7847666)

Traub, R.J., Solodkin, A., Meller, S.T. and Gebhart, G.F. (1994) Spinal cord NADPH-diaphorase histochemical staining but not nitric oxide synthase immunoreactivity increases following carrageenan-produced hindpaw inflammation in the rat. *Brain Res.* 668:204-10.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=7535654](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=7535654)

Traub, R.J., Silva, E., Gebhart, G.F. and Solodkin, A. (1996) Noxious colorectal distention induced c-Fos protein in limbic brain structures in the rat. *Neurosci. Lett.* 215: 165-68

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=8899739](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=8899739)

Solodkin, A., and Van Hoesen, G.W. (1996) Entorhinal cortex modules of the human brain. *J. Comp. Neurol.* 365(4): 610-27.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=8742306](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=8742306)

Solodkin, A., Veldhuizen S.D. and Van Hoesen, G.W. (1996) The viability and vulnerability of parvalbumin-containing neurons in the entorhinal cortex in Alzheimer's disease. *J Neurosci.* 16: 3311-21.



[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=8627368](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=8627368)

Reed, LA; Grabowski, TJ; Schmidt, ML; Solodkin, A; Goat, A; Van Hoesen, GW; Schelper, RL and Trojanowski, JQ. (1997) Autosomal dominant dementia with widespread neurofibrillary tangles. *Ann. Neurol.* 42: 564-72.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=9382467](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=9382467)

Lidow MS and Solodkin A (1997) Use of the cyclone Storage Phosphor System for rapid development of a receptor autoradiographic assay. *Tools and Techniques*, 22: pp4.

Small SL and Solodkin A (1998) Neurobiology of stroke rehabilitation. *The Neuroscientist*, 4, 426-34

Solodkin, A; Hlustik, P; Noll DC and Small SL (2001) Lateralization of Motor Circuits and Handedness during Finger Movements *Neurology Eur J Neurol* 8: 425-34

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=11554905](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=11554905)

Hlustik P; Solodkin, A; Gullapalli R; Knoll DC and Small SL (2001) Somatotopy in human primary motor and somatosensory hand representations revisited. *Cerebral Cortex* 11: 312-21

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=11278194](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=11278194)

Hlustik P; Solodkin, A; Knoll DC and Small SL (2002) Functional Lateralization of the human premotor cortex during sequential movements. *Brain and Cognition* 49(1): 54-62.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=12027392](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=12027392)

Small SL, Hlustik P, Genovese C, Noll DC and Solodkin A (2002) Cerebellar hemispheric activation ipsilateral to the paretic hand correlates with functional recovery after stroke Brain 125: 1544-57

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=12077004](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=12077004)

Solodkin A, Hlustik P, Chen EE and Small SL (2004) Fine Modulation in Network Activation during Motor Execution and Motor Imagery. Cerebral Cortex. 14: 1246-55.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=15166100](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15166100)

Milton J, Small SL and Solodkin A (2004) On the road to automatic: Dynamic aspects of skill acquisition. J Clin. Neurophysiol. 21(3), 134-43.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=15375344](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15375344)

Hlustik P, Solodkin A, Noll DG and Small SL (2004) Cortical Plasticity During Three-week Motor Skill Learning. J Clin Neurophysiol. 21(3), 197-207.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=15375348](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15375348)

Bonthius DJ, Solodkin A and Van Hoesen GW (2005) Pathology of the insular cortex in Alzheimer's disease depends on cortical architecture. J. Neuropath. Exp. Neurol. 64: 910-22.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=16215463](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=16215463)

Bhimani AA, Hlustik P, Small SL, Solodkin A (2006) Complex motor function in humans: validating and extending the postulates of Alexandr R. Luria. Cogn Behav Neurol 19:11-20.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=16633015](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=16633015)

Buccino G, Solodkin A, Small SL (2006) Functions of the mirror neuron system: implications for neurorehabilitation. Cogn Behav Neurol 19:55-63.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=16633020](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=16633020)

Goldman MB, Heidinger L, Kulkarni K, Zhu DC, Chien A, McLaren DG, Shah J, Coffey CE, Jr., Sharif S, Chen E, Ufring SJ, Small SL, Solodkin A, Pilla RS (2006) Changes in the amplitude and timing of the hemodynamic response associated with prepulse inhibition of acoustic startle. NeuroImage 32:1375-84

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=16843683](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=16843683)

Karunanayaka PR, Holland SK, Schmithorst VJ, Solodkin A, Chen EE, Szaflarski JP, Plante E (2007) Age-related connectivity changes in fMRI data from children listening to stories. NeuroImage 34:349-60.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=17064940](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=17064940)

Milton J, Solodkin A, Hlustik P, Small SL (2007) The mind of expert motor performance is cool and focused. Neuroimage 35: 804-13.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=17317223](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=17317223)

Ertelt D, Small S, Solodkin A, Dettmers C, McNamara A, Binkofski F and Buccino G (2007) Action observation has a positive impact on rehabilitation of motor deficits after stroke. Neuroimage. 36 Suppl 2:T164-73.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=17499164](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=17499164)

Milton J, Small SL and Solodkin A (2008) Imaging motor imagery: methodological issues

related to expertise. *Methods*. 45(4): 336-41.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=18762138](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=18762138)

Walsh RR, Small SL, Chen EE and Solodkin, A (2008). Network activation during bimanual movements in humans. *NeuroImage*. 43(3): 540-53

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=18718872](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=18718872)

Robinson RG, Jorge RE, Moser DJ, Acion L, Solodkin A, Small SL, Fonzetti P, Hegel M and Arndt S (2008). Escitalopram and problem-solving therapy for prevention of poststroke depression: a randomized controlled trial. *JAMA* 299(20): 2391-400.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=18505948](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=18505948)

Dick, AS, Solodkin, A, Small, SL, (2010). Neural development of networks for audiovisual speech comprehension. *Brain and Language* 114(2):101-14.

PMID: [19781755](https://pubmed.ncbi.nlm.nih.gov/19781755/)

Raja A, Dick AS, Josse G, Solodkin A, Huttenlocher P, Levine S and Small SL (2010). Left Hemisphere Regions are Critical for Language in the Face of Early Left Focal Brain Injury (2010). *Brain*, 133 (Pt 6), 1701-1716.

<http://www.ncbi.nlm.nih.gov/pubmed/20466762>

Small SL, Buccino, G and Solodkin, A (2010) The Mirror Neuron System and Treatment of Stroke. *Developmental Psychobiology*. [Epub ahead of print].

<http://www.ncbi.nlm.nih.gov/pubmed/21108242>

Solodkin, A, Hassan, U, Suiszgate, R, Chen, EE, Kotter, R and Small SL (2010). Virtual brain transplantation (VBT): A method for accurate image registration and parcellation in large cortical stroke. *Arch. Ital. Biol.* 148: 219-241.

<http://www.ncbi.nlm.nih.gov/pubmed/21175010>

Solodkin, A; Peri E, Chen EE, Ben-Jacob E and Gomez CM (2011). Cerebellar networks in spinocerebellar ataxia 1 as biomarkers of disease severity and duration. *Cerebellum*. 10(2), 218-232

<http://www.ncbi.nlm.nih.gov/pubmed/20886327>

Mikami K, Jorge RE, Moser DJ, Arndt S, Solodkin, A, Small, SL, Fonzetti, P, Hegel MT and Robinson RG (2011). Increased Frequency of First-Episode Poststroke Depression After Discontinuation of Escitalopram. *Stroke*; 42: 3281-3283.

<http://www.ncbi.nlm.nih.gov/pubmed/21868736>

Solodkin A, Gomez CM. Spinocerebellar ataxia type 6. *Handbook of clinical neurology* (2012); edited by PJ Vinken and GW Bruyn 2012;103:461-473.

<http://www.ncbi.nlm.nih.gov/pubmed/21827907>

Dick AS, Goldin-Meadow S, Solodkin A, Small SL (2012). Gesture in the developing brain. *Dev Sci*.15(2):165-80.

PMID: 22356173

Mashal N, Solodkin A, Dick AS, Chen EE, Small SL. (2012). A network model of observation and imitation of speech. *Front Psychol*. 3:84.

PMID: 22470360

Small SL, Buccino G, Solodkin A (2012). The mirror neuron system and treatment of Stroke. *Dev Psychobiol*. 54(3): 293-310.

PMID: 22415917

Muftuler, L.T., E.P. Davis, C. Buss, A. Solodkin, M.Y. Su, K.M. Head, A.N. Hasso and C.A. Sandman (2012). Development of white matter pathways in typically developing preadolescent children. *Brain Res*. 1466: 33-43.

PMID: 22885631

Baram, T.Z., E.P. Davis, A. Obenaus, C.A. Sandman, S.L. Small, A. Solodkin and H. Stern (2012). Fragmentation and unpredictability of early-life experience in mental disorders. *The American Journal of Psychiatry* 169: 907-915.

[PMID: 22885631](#)

Andric M, Solodkin A, Buccino G, Goldin-Meadow S, Rizzolatti G, Small SL. (2013). Brain Function overlaps when people observe emblems, speech and grasping. *Neuropsychologia*; 51(8):1619-1629.

[PMID: 23583968](#)

Dick AS, Raja Beharelle A, Solodkin A, Small SL. (2013). Interhemispheric functional connectivity following prenatal or perinatal brain injury predicts receptive language outcome. *J Neurosci*; 33(13): 5612-25.

[PMID: 23536076](#)

Solodkin A., Chen EE, Van Hoesen GW, Heimer L, Shereen A, Kruggel F, and Mastrianni, J (2013). In vivo parahippocampal white matter pathology as a biomarker of disease progression to Alzheimer Disease. *Journal of Comparative Neurology*. 521(18):4300-17

[PMID: 23839862](#)

Mikami K, Jorge RE, Moser DJ, Arndt S, Jang M, Solodkin A, Small SL, Fonzetti P, Hegel MT, Robinson RG. (2013). Prevention of poststroke apathy using escitalopram or problem-solving therapy. *Am. J. Geriatr. Psychiatry* 21: 855-62

[PMID: 23930743](#)

Small, SL, Buccino G and Solodkin A (2013). Brain Repair after stroke- a novel neurological model. *Nature Review of Neurology*; 9(12):698-707

[PMID: 24217509](#)

Maras, P., Molet, J., Chen, Y., Rice, C., Ji, S., Solodkin, A., Baram, T. Z. (2014). Preferential loss of dorsal hippocampus synapses underlies memory impairments provoked by short, multi-modal stress. *Mol. Psychiatry*, 745, 811-822.


[PMID: 24969262](#)

Mikami K, Jorge RE, Moser DJ, Arndt S, Jang M, Solodkin A, Small SL, Fonzetti P, Hegel MT, Robinson RG (2014). Prevention of Post-stroke generalized anxiety disorder, using escitalopram or problem solving therapy. *J Neuropsychiatry Clin Neurosci*. 26(4): 323-8.

[PMID: 24457590](#)

Falcon MI, Gomez CM, Chen EE, Shereen A, Solodkin A. (2015). Early cerebellar network shifting in spinocerebellar ataxia type 6. *Cereb Cortex*. 26(7): 3205-18.

[PMID: 26209844.](#)

 Adhikari MH, Raja Beharelle A, Griffa A, Hagmann P, Solodkin A, McIntosh AR, Small SL, Deco G (2015). Computational Modeling of Resting-state activity demonstrates markers of normalcy in children with Perinatal Stroke. *J Neurosci*. Jun 10;35(23):8914-24.

[PMID: 26063923.](#)

Matzke H, Schirner M, Vollbrecht D, Rothmeier S, Llarena A, Rojas R, Triebkorn P, Domide L, Mersmann J, Solodkin A, Jirsa VK, McIntosh AR, Ritter P. (2015). TVB-EduPack-An Interactive learning and scripting platform for The Virtual Brain. *Front Neuroinform*. 9:27.

[PMID: 26635597](#)

Falcon MI, Riley JD, Jirsa V, McIntosh AR, Shereen AD, Chen EE, Solodkin A (2015). The Virtual Brain: Modeling biological correlates of recovery after chronic stroke. *Front Neurol*. 6:228.

[PMID: 26579071](#)

Wu J, Srinivasan R, Quinlan EB, Solodkin A, Small SL, Cramer SC. J Neurophysiol (2016). Utility of EEG measures of brain function in patients with acute stroke. J Neurophysiol;115(5):2399-405.

[PMID: 26936984](#)

Falcon MI, Riley JD, Jirsa V, McIntosh AR, Chen EE, Solodkin A (2016). Functional mechanisms of Recovery after Chronic Stroke: Modeling with The Virtual Brain. eNeuro. 4;3(2).

[PMID: 27088127](#)

Falcon MI, Jirsa V, Solodkin A. (2016). A new neuroinformatics approach to personalized medicine in Neurology: The Virtual Brain. Curr Opin Neurol. 29(4):429-36.

[PMID: 27224088](#)

Molet J, Maras PM, Kinney-Lang E, Harris NG, Rashid F, Ivy AS, Solodkin A, Obenaus A, Baram TZ. (2016). MRI uncovers disrupted hippocampal microstructure that underlies memory impairments after early-life adversity. Hippocampus 26(12):1618-1632.

[PMID: 27657911](#)

Bezgin G, Solodkin A, Bakker R, Ritter P, McIntosh AR. (2017). Mapping complementary features of cross-species structural connectivity to construct realistic "Virtual Brains". Hum Brain Mapp 38(4):2080-2093.

[PMID: 28054725](#)

Kruggel F, Masaki F, Solodkin A, Alzheimer's Disease Neuroimaging Initiative. (2017). Analysis of longitudinal diffusion-weighted images in healthy and pathological aging: An ADNI study. J Neurosci Methods 278:101-115.

[PMID: 28057473](#)



Riley JD, Chen EE, Winsell J, Davis EP, Glynn LM, Baram TZ, Sandman CA, Small SL, Solodkin A. (2018). Network specialization during adolescence: Hippocampal effective connectivity in boys and girls. *Neuroimage*. 175: 402-412.

[PMID:29649560](#)

Zimmermann J, Perry A, Breakspear M, Schirner M, Sachdev P, Wen W, Kochan NA, Mapstone M, Ritter P, McIntosh AR, Solodkin A. (2018). Differentiation of Alzheimer's disease based on local and global parameters in personalized Virtual Brain models. *Neuroimage Clinical*. 19: 240-251.

[PMID: 30035018](#)

Kruggel F, Solodkin A. (2019) Determinants of structural segregation and patterning in the human cortex. *Neuroimage*. 196:248-60.

[PMID: 30995518](#)

Stefanovski L, Triebkorn P, Spiegler A, Diaz-Cortes MA, Solodkin A, Jirsa V, et al. (2019) Linking Molecular Pathways and Large-Scale Computational Modeling to Assess Candidate Disease Mechanisms and Pharmacodynamics in Alzheimer's Disease. *Frontiers in computational neuroscience*. 13:54.

[PMID: 31456676](#)

Monroe DC, Blumenfeld RS, Keator DB, Solodkin A, Small SL. One season of head-to-ball impact exposure alters functional connectivity in a central autonomic network. *Neuroimage*. 2020 Aug 28;223:117306. doi: 10.1016/j.neuroimage.2020.117306. Epub ahead of print.

[PMID: 32861790.](#)

Kruggel F, Solodkin A. Heritability of Structural Patterning in the Human Cerebral Cortex. *Neuroimage*. (2020) ;221:117169. doi: 10.1016/j.neuroimage.117169. Epub ahead of print.

[PMID: 32693166.](#)

Stefanovski L, Meier JM, Pai RK, Triebkorn P, Lett T, Martin L, Bülau K, Hofmann-Apitius M, Solodkin A, McIntosh AR, Ritter P. Bridging scales in Alzheimer's disease: Biological Framework for brain simulation with The Virtual Brain (2021). *Front. Neuroinform.* 2021 1;15:630172. doi: 10.3389/fninf.2021.630172. eCollection 2021.  
[PMID: 33867964](#)

Editorial: Brain Modeling of Neurodegenerative Disorders. Gulín-González J, Bringas-Vega ML, Martínez-Montes E, Ritter P, Solodkin A, Valdes-Sosa MJ, Valdes-Sosa PA. *Front Neuroinform.* 2022 May 26;16:937790. doi: 10.3389/fninf.2022.937790. eCollection 2022. PMID: 35712675.

Brain simulation arguments machine-learning classification of dementia. Triebkorn P, Stefanovski L, Dhindsa K, Diaz-Cortes MA, Bey P, Bülau K, Pai R, Spiegler A, Solodkin A, Jirsa V, McIntosh AR, Ritter P; Alzheimer's Disease Neuroimaging Initiative. *Alzheimers Dement (N Y)*. 2022 May 15;8(1):e12303. doi: 10.1002/trc2.12303. eCollection 2022. PMID: 35601598

Bridging scales in Alzheimer's disease: Biological framework for brain simulation with The Virtual Brain. Stefanovski L, Meier JM, Pai RK, Triebkorn P, Lett T, Martin L, Bülau K, Hofmann-Apitius M, Solodkin A, McIntosh AR, Ritter P. *Front Neuroinform.* 2021 Apr 1;15:630172. doi: 10.3389/fninf.2021.630172. eCollection 2021. PMID: 33867964

Gyral and sulcal connectivity in the human cerebral cortex. Kruggel F, Solodkin A. *Cereb Cortex.* 2022 Sep 14:bhac338. doi: 10.1093/cercor/bhac338. Online ahead of print. PMID: 36104856

#### b) Non-peer reviewed papers

Van Hoesen G.W., Solodkin A. and Hyman B.T. (1995) Neuroanatomy of Alzheimer's disease: Hierarchical vulnerability and Neural Systems compromise. *Neurobiol. Aging* 16(3): 278-80.

Small SL and Solodkin A (2001) What can Neurobiology tell us about the rehabilitation of Golfers with Central Nervous System disease? In J. Milton (Ed.), *Golf Neurology Course*, Philadelphia, PA: American Academy of Neurology.

Hlustik P, Solodkin A and Small SL (2003). Organization of human motor and somatosensory areas in the control of movement [Review] *Česká a Slovenská Neurologie a Neurochirurgie*; 66/69(2): 87-94.

Milton, JG, Small, SL, Solodkin, A, (2004). Guest editorial. *Journal of Clinical Neurophysiology* 21, 133.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=15375343](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15375343)

Solodkin, A., Buccino, G., Small, S.L., 2006. The neurobiology of hand motor recovery after stroke. *Cognitive and Behavioral Neurology* 19, 175-176.

<http://www.scopus.com/scopus/inward/record.url?eid=2-s2.0-33845771687&partnerID=40>

### **c) Book chapters**

#### ***Peer-Reviewed***

Solodkin A, Van Hoesen GW and Damasio A. (1997) Neuropathology and neurochemistry of Alzheimer's disease. In: *Alzheimer's disease. Molecular aspects and Pharmacological treatments*. (Brioni JD and Decker MW eds). John Wiley & Sons, Inc., NY. Pp: 151-178.

Solodkin, A. and Van Hoesen, G.W. (1999) Entorhinal Cortex. In: *Encyclopedia of Neurosciences*. G. Adelman (ed.). Elsevier Science B.V. pp. 661-63.

Van Hoesen, G.W. and Solodkin, A. (1999) Perirhinal cortex. In: *Encyclopedia of Neurosciences*. G. Adelman (ed.). Elsevier Science B.V. pp.1613-15.

Van Hoesen, G.W., Solodkin, A. and Semendeferi, K. (1999) Neurochemistry of the temporal cortex in the primate brain. In: Neurochemical circuitry of the primate brain. Handbook of chemical Neuroanatomy. F.E. Bloom (ed.) Elsevier Science Publications, Amsterdam.

Solodkin, A, Hlustik, P and Buccino G (2007) The Human Motor System. In: Handbook of Physiology. Ed. J Cacioppo, L Tassinari and G Bernston. Cambridge University Press. pp: 507-539.

Solodkin, A (2007) Efferents. Oxford Companion to emotion and the affective sciences. Sander D and Scherer KR (ed). Oxford University Press. pp: 133.

Solodkin, A (2007) The somatic Nervous System. Oxford Companion to emotion and the affective sciences. Sander D and Scherer KR (ed). Oxford University Press. pp: 380-381.

Milton J, Small SL and Solodkin A (2008). Why did Casey strike out? The neuroscience of hitting. In: Your brain on Cubs. Inside the heads of players and fans. Dan Gordon (Ed). Dana Press. pp: 43-57.

Solodkin, A and Gomez CM Gomez (2012). Spinocerebellar ataxia type 6, Chapter 29. In: Handbook of Clinical Neurology. Series Editors: MJ Aminoff, F Boller and DF Swaab. 3<sup>rd</sup> series: Ataxic Disorders. Edited by: SH Subramony and A Durr (pp. 461-473). Elsevier.

Solodkin, A. J., Os, G., Gomez, C. (2014). Spinocerebellar atrophies. In L. Saba (Ed.), Solodkin, A. J., *Imaging in Neurodegenerative disorders*. (pp. 355-376). Oxford University Press.

Solodkin A, Zimmermann J, McIntosh RA, Stefanovski L, Ritter P (2018). Neurological biomarkers and Neuroinformatics: The role of The Virtual Brain. In: Molecular-Genetic and Statistical Techniques for Behavioral and Neural Research. R. Gerlai Editor; (pp: 3-30), Elsevier.

### ***Encyclopedia Articles***

Solodkin, A. J., Van Hoesen, G., Insausti, R. (2014). Entorhinal Cortex. In *Reference module in Biomedical Sciences* Elsevier.

Insausti, R., Van Hoesen, G., Solodkin, A. J. (2014). Perirhinal Cortex. In *Reference module in Biomedical Sciences* Elsevier.

### d) Theses

B.Sc. (1978) Imprinting and Paradoxical sleep. Anahuac University, Mexico. Advisor: Dr. M. Corsi-Cabrera.

M.Sc. (1982) Possible role of descending serotonergic pathways upon the habituation of monosynaptic responses in the isolated spinal cord of the frog. Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico. Advisor: Dr. Pablo Rudomin.

Ph.D. (1991) Calcitonin gene related-peptide as a model of plasticity in primary afferents: Anatomical and Biochemical studies. Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico and National Institutes of Health, Bethesda, MD. Advisors: Dr. M.A. Ruda and Dr. Pablo Rudomin.

## Invited Lectures

- Department of Physiology and Biophysics. Chicago Med. April 2002. "Functional Specialization within Primary Motor Cortex: Direct correlation between Functional MRI and Chemoarchitectonics".
- Department of Human Physiology, University of Parma. Parma, Italy. December 2002. *Ipsilateral Control of Movement and its Role on Motor Recovery after Stroke: Myth or Reality?*
- Department of Human Physiology. University of Parma. Parma Italy. December 2002. *"Motor Imagery: A Novel Perspective on the Organization of the Motor System in the Human Brain"*.
- Rehabilitation Institute of Chicago. Northwestern University. September 2002. *fMRI Studies of Normal and Impaired Language and Motor Function"*
- Rehabilitation Institute of Chicago. Northwestern University. March 2003. *"Introduction to the Functional Anatomy of the Human Cerebral Cortex"*
- Functional MRI of the brain in health and disease symposium. Center for MRI research. University of Illinois at Chicago. April 2003. *"Fine Modulation in Network Activation during Motor Execution and different types of Motor Imagery"*
- Cincinnati Children's hospital. University of Cincinnati. Computational Neuromodeling seminar. November 2004. *"Structural Equation Models of Hand Movement in Man Based on fMRI and EMG data."*

- Imaging Recovery from Stroke. Hamburg Germany. Organized by C. Weiller, M. Rijntjes and J. Liepert. May 2005. *“Network Models of Bimanual Cooperation in Stroke Recovery”*
- Meeting of the Cognitive Neuroscience Society. Stresa, Italy. June 2005. *“Network Modeling applied to fMRI Analysis.”*
- Human Brain Mapping Meeting. Minneapolis, MN. June 2005. *“How well do group structural equation models account for individual data? Application for Stroke Recovery”*
- The Gonda Brain Research Center. Bar Ilan University. Tel-Aviv, Israel. Spring 2006. *“Predictions of memories lost: Is the preclinical diagnosis of Alzheimer disease possible?”*
- Department of Neurology, Palacky University, Olomuc, Czech Republic. May 2007. *“Stroke recovery as described by network analysis using structural equation modeling”.*
- Neurology Grand Rounds. University of Illinois at Chicago. October, 2007. *“Monkey see, Monkey do: A Novel Perspective on the Organization of the Motor System in the Human Brain”.*
- Department of Radiology. National Yang Ming University, Taipei, Taiwan. March 2008. *“Is there plasticity of M1 after focal ischemic damage? Role of the normal hand”*
- Department of Psychology. National Yang Ming University, Taipei, Taiwan March 2008. *“Introduction to the Neurobiology And Neurology of Emotions”*

- National Yang Ming University, Taipei, Taiwan. March 2008. *“Neural Activation Patterns during Functional Recovery after Stroke”*.
- Department of Anatomy and Neurobiology. University of California at Irvine. Irvine, CA. June 2009. *“Human Motor Function: A Connectivity Approach”*.
- Department of Human physiology. University of Ferrara. Ferrara, Italy. July 2009. *“Modeling networks for motor function and its changes after stroke.”*
- Ataxia Association Meeting (AIM). Rosemond, IL. March 2010. *“Imaging correlates of SCA1 pathogenesis: From biomarkers to bioexplanations”*.
- Center for Advanced Imaging. Department of Radiology. NorthShore University Health System. North Western University. Evanston, IL. July 2010. *“Predictions of Memories lost. Is the preclinical diagnosis of Alzheimers’s disease possible?”*
- Orange County Stroke Rehab Network. Stroke Rehabilitation Continuing education workshop” Chapman University, Orange, CA. November, 2011. *“A novel therapy for and motor recovery after stroke”*.
- NeuroMed: Istituto Neurologico Mediterraneo. Dai Neuroni specchio all’action observation treatment: Un esempio di ricerca traslazionale. *Lecture: Mirror mirror on the wall: Imitation and motor rehabilitation*. Pozzilli, Italy. May 2012.
- Human Brain Mapping Meeting Panel: Neural Repair as Changes in network Connectivity. *Presentation: “Network recovery after stroke: building hand motor therapy on physiological data and anatomical connectivity”*, Beijing, China, June 2012.



- Brain Mapping Colloquium: *Elucidating plasticity of cerebellar white matter pathways in Spinocerebellar ataxia type 6*. ICTS, UC Irvine. January 18, 2013.
- *Theodore von Kármán Fellowship* – visiting scholars programme for incoming international scientists. RWTH Aachen University. March, 2014.
- Julich Brain Imaging Center. *Some thoughts on Modeling Brain dynamics*. Julich, Germany, March 4<sup>th</sup>, 2014
- The Virtual Brain Training Workshop: *Modeling the Impact of Structural lesions*. OHBM, Hamburg, Germany, June 2014.
- Bernstein Conference. Bernstein Center for Computational Neuroscience. *A clinical application of The Virtual Brain: Functional Mechanisms in Chronic Stroke*. Gottingen, Germany, August 2<sup>nd</sup>, 2014
- Society for Neuroscience: Virtual Brain Node 2: *On the Neurophysiology of Recovery after stroke*. Washington, DC November, 2014.
- Epicenter Symposium. *The Virtual Brain*. UCI. March 3, 2015.
- International Symposium FRIAS (Freiburg Institute for Advanced Studies). *The Virtual Brain: A Clinical Application*. Freiburg, Germany. November 26-27, 2015
- The Royal Society. Applying computational modeling to clinical neuroscience. Theo Murphy Meeting. *Using The Virtual Brain as an informatics microscope to uncover biophysical parameters of stroke recovery*. April 6-7, 2016

- The Virtual Brain Dynamic Causal modelling workshop. University College London. *“Modelling the impact of structural lesions”*. April 5-6, 2016
- 10<sup>th</sup> FENS (Federation of European Neurosciences Societies) forum of Neuroscience. *“Exploring Models Associated with Recovery of Function after Stroke: Uncovering biophysical parameters with The Virtual Brain”*. Full brain network dynamics- modeling, analyses, experiments. Copenhagen, Denmark, July 2nd, 2016
- Neural Dynamics and Brain Health. *“Multiscale Connectomics for Precision Cerebrovascular Neurology”*. Rotman Research Institute. Toronto. Canada. March 20-22, 201
- 5th HBP School. 27 November – 3 December 2017 in Obergurgl, Austria
- 14<sup>th</sup> International Workshop on fMRI in the Neurosciences. Keynote: *“Precision Medicine: Uncovering Cellular Mechanisms of Alzheimer’s disease with TheVirtualBrain”* Olomouc, Czech Republic, April 5-6, 2018
- 25 Jornadas Academicas. Instituto de Neurobiologia. Keynote: *“Precision Medicine: Uncovering Cellular Mechanisms of Alzheimer’s disease with TheVirtualBrain”*. UNAM. Sep. 24-28. Queretaro. Mexico.
- BrainModes. *Computational modeling of neurodegeneration and the aging brain*. Havana, Cuba Dec. 4-5, 2018. *“Precision Medicine: Uncovering Cellular Mechanisms of Alzheimer’s disease with TheVirtualBrain”*.
- Behavioral and Brain Sciences. UT Dallas, Jan 4, 2019. *“Precision Medicine: Uncovering Cellular Mechanisms of Alzheimer’s disease with TheVirtualBrain”*.

- Hobson Wildenthal College Round table, UT Dallas, September 13, 2019 “*Uncharted territory: The role of Neuroinformatics for Precision Medicine in Alzheimer’s disease. TheVirtualBrain*”
- BrainModes. *Exploring Unified Principles of Connectivity and Dynamics. Pokhara, Nepal, December 11-13, 2019* “*A mechanistic approach to Alzheimer’s disease*”.
- Department Seminar. *Anatomy and Neurobiology, Boston University School of Medicine. November 19, 2020.* “*A computational approach to Alzheimer’s disease*”.
- Frontiers of BrainHealth Lecture Series. Center for Brain Health. BBS, UT Dallas. January 29, 2021. “*The Virtual Brain: A Computational Microscope to Elucidate Brain Mechanisms from Health to Dementia*”
- BrainModes. *Brain Health and multiscale brain dynamics. Vina del Mar, Chile, December 4-6, 2022* “*A mechanistic approach to Alzheimer’s disease*”.

## Active and Completed Grants

### Active

CC\* Team: Texas Research and Education Cyberinfrastructure Services (TRECIS).  
NSF award #2019135(Simmons-UTDallas component). Duration: 2020-2022

GOAL: TRECIS establishes a regional hub that advances collaborative support for research computing and expands the use of advanced cyberinfrastructure (CI) and expertise throughout the University of Texas system.

**Project 2.** Brain dynamics in aging and dementia (PI: Ana Solodkin) Goal: Simulate biophysical parameters of the brain to be used as biomarkers to identify disease progression and severity in dementia. CI needs and impact: Leverage research computing expertise to enable wide international collaboration over a unique Neuroinformatics platform that is used by the science team in both brain research and education.

Adapting Successful Practices to foster an Inclusive, Respectful, and Equitable Environment (ASPIRE<sup>2</sup>) – (Adams S). NSF

Goal: To support the adaptation of evidence-based systemic change strategies to promote equity for STEM faculty within an institution of higher education (UTDallas).

Role: Climate committee

### Completed

BrightFocus Foundation (AR McIntosh). *Building a Personalized Virtual Brain with Alzheimer's Disease to Guide Clinical Decisions.* 2017-2020

Goal: This research project is leading us towards a personalized medicine approach to understanding, preventing and treating brain disorders, specifically commonalities between Alzheimer's disease and Parkinson's disease, using a network dynamics approach via TheVirtualBrain.

Role: Co-Investigator

Human Brain Project (HBP) (Ritter): *Testing pathophysiological models of brain diseases.* 2019-2020

Goal: To develop a specific hypothesis-driven use case for neurodegenerative diseases by testing the validity of elaborate pathophysiological models using Medical Informatics Platform-driven analysis of large-scale clinical data.

Role: Co-Investigator

NIH/NICHD: 1P50MH096889-01 (Baram): *Fragmented early life environmental and emotional / cognitive vulnerabilities.* 06/17/2013-04/30/2018

Goal: The major goal of this project is to understand the prenatal and early postnatal influences of consistent and inconsistent maternal care on cognitive and emotional outcomes, and to assess the neurobiology underlying these outcomes in human and relate them to the cellular biology in animal models.

Role: Principal Investigator Project 4 and Co-Investigator Imaging Core

NIH/NIDCD: 5R01DC03378-11A2 (Small): *Functional Neuroanatomy of Normal and Impaired Language.* 09/30/1996-08/31/20

Goal: The major goals of this project are to determine the functional neuroanatomy of normal language processing, primarily at the lexical and sentential levels, and in ecological context.

Role: Co-Investigator

James S McDonnell Foundation (McIntosh): *Network mechanisms underlying cognition and recovery of function in the human brain.* 11/01/2006 - 12/31/2014

Goal: The goal of this grant is to determine of plastic changes in brain networks after motor stroke and during stroke recovery.

Role: Co-Investigator

NIH/NINDS: 1RO1054942-01A1 (Solodkin): *Mirror imitation therapy for motor recovery after stroke.* 07/01/07-

06/31/13

Goal: The goal of this project is to assess the efficacy of a novel motor imitation therapy for the recovery of fine skill hand movement in chronic stroke.

Role: Principal Investigator

University of Chicago Institute of Translational Medicine: Collaborative / Translational Study Award (CTSA) with NorthShore University Health Systems (Mastrianni): *Validation of a cognitive screening assessment combined with functional brain imaging to predict Alzheimer's disease in African Americans.* 04/15/2010 – 04/14/2011

Role: Co-Investigator

NIH/NIDCD: 1R01DC007488-02 (Small): *Neurophysiological Measurement in Aphasia Treatment.* 04/01/2005 - 03/31/2010

Goal: The goal of the project is to facilitate the use of neurophysiological (functional imaging) measures in patients with aphasia.

Role: Co-Investigator

NIH/NIDCD: R21/R33 DC008638-01 (Small): *Bioinformatics Infrastructure for Large Scale Studies of Aphasia Recovery.* 12/1/2006 - 11/30/2011

Goal: This project proposes to build computational infrastructure to facilitate the prospective investigation of aphasia recovery in a large group of patients (R21 phase) and then to execute such a study (R33 phase).

Role: Co-Investigator

Center for Integrative Neuroscience and Neuroengineering Research (CINNR) (Solodkin): *Detection of Neuropathological changes in Spinocerebellar ataxias by Diffusion Tensor Imaging.* 07/01/2007 - 07/01/2010

Goal: The goal of this project is the characterization of progression of pathology in SCAs as assessed with a variety of MRI modalities.

Role: Principal Investigator

Brain Research Foundation (Solodkin): *Early diagnosis of Alzheimer's disease using Diffusion Tensor Imaging* 07/01/2003 - 07/01/2010

Goal: The major goal of this project is to use new radiological techniques to diagnose Alzheimer's disease in cases of mild cognitive impairment.

Role: Principal Investigator

Charles A. Dana Foundation (Alperin): *Cerebral vascular compliance measurements by dynamic MRI: A potential new diagnostic test for mild traumatic brain injury and for explaining fMRI related variability of hemodynamic response.* 09/01/2003–08/31/2005

Role: Principal Investigator (subcontract)

NIH/NIMH 5K01MH001916-05: *Neurobiological basis of depression after focal brain damage.* 09/15/1999 – 08/31-2004

Goal: The goal of this research is to investigate the neuroanatomical and neuropharmacological differences between depressed and non-depressed patients following focal ischemic brain damage, and to correlate the findings from studies of autopsy tissue with neuroimaging studies using fMRI.

Role: Principal Investigator

NIH/NIMH 1R01MH065134-01A1 (Robinson, R): *Prevention of Post-stroke depression-treatment strategy.* 07/01/02-06/30/06

Goal: The goal of this study is to test the hypothesis that prophylactic antidepressant treatment of individuals with post-stroke depression will enhance their recovery from stroke by decreasing their likelihood of suffering the emotional, physical, cognitive and mortality consequences of depression.

Role: Principal Investigator (Subcontract)

NIH/NIMH: 1R01 MH57860-01A1 (Tamminga): *Limbic cortex in schizophrenia.*

07/01/2002 - 06/30/2007

Goal: The goal of this work is to identify and characterize the nature and localization of anatomic and chemical abnormalities in the limbic cortex of schizophrenic (hippocampus, entorhinal cortex, and anterior cingulate) contributing to the pathophysiology of schizophrenia.

Role: Consultant

## **Mentoring**

### **Leah Mary Chandy**

Stage mentored: PhD candidate

Starting date: November 2020

Research topic: Predicting coma outcome with computational methods

### **Sathish Thoppay**

Stage mentored: PhD candidate

Starting/finish date: Summer 2020-Summer 2021

Research topic: Brain dynamics in the aging brain

### **Yile Wang**

Stage mentored: Master's in science candidate

Starting date: Fall 2019 -

Research topic: Brain dynamics in Alzheimer's disease

### ***Annette Glotfelty (Co-mentor with Dr. SL Small)***

*Stage mentored: PhD candidate*

Starting date: December 2020

Research topic: Functional connectivity dynamics during naturalistic language

### ***Joelle Zimmermann***

Stage mentored: PhD student (Co-Mentor with AR McIntosh, U Toronto)



Starting date: September 15, 2016

Research topic: Modeling brain dynamics in Alzheimer's disease

***Kevin Lee***

Stage mentored: Summer research

Starting date: 03-08, 2016

Research topic: Graph analysis of structural connectivity during development

***Avital Fischer***

Stage mentored: MD-PhD student (Lab Rotation)

Date: September 1st, 2014

Research topic: Network assessment in development

***Jordanna Monteiro***

Stage mentored: BSc honor's thesis

Starting date: July 1st, 2013

Research Topic: Parameter exploration using The Virtual Brain

***Yan Yan***

Stage Mentored: Medical student independent research.

Starting date: September, 2013

Research Topic: Structural connectome in Stroke

***Maria Inez Falcon***

Stage mentored: PhD student (Primary Mentor)

Starting date: July 1st, 2012

Graduation: May 2016.

Research topic: Network assessment of recovery after stroke.

***Duke Shereen, PhD***

Stage mentored: Post-doctoral scholar  
Training dates: December 2010-2014  
Research topic: Network modulation in stroke

***Emily Nordhoff (Claremont College)***

Stage mentored (Co-mentored with Dr. D. Reinkensmeyer): Summer research  
Training dates: 6/15/2012 - 8/28/2012.  
Research Topic: Vibration and balance control

***John Colburn (Claremont College)***

Stage mentored: Summer research (Co-Mentor with D. Reinkensmeyer)  
Training dates: 6/15/2012 - 8/28/2012.  
Research Topic: Vibration and balance control

***Blanca Valdovinos (University of Rochester Medical student)***

Stage mentored: Summer research  
Training dates: 6/15/2012 - 7/30/2012  
Research Topic: Translational study on cerebellar ataxia

***Kristian Coerper***

Stage mentored: Thesis honors, BSc.  
Training dates: March 2010-December 2010  
Research topic: Assessment of motor recovery after mirror therapy.  
Present location: MAT, UTEP at The University of Chicago

***Eitan Peri, MSc***

Stage mentored: Thesis for MSc degree in Bioengineering  
Training dates and degree: November 2005-January 2008. Master in Science degree.  
Research topic: Development of software application for network analysis in fMRI.  
Present location: Tel-Aviv Israel. Director of Product Development at Check-Cap LLC.

***Daniela Cardozo, MD***

Stage mentored: Post-doctoral

Research topic: Mirror therapy for hand motor recovery after stroke.

Present Location: Private practice. Caracas, Venezuela.

***Ryan Walsh, MD PhD***

Stage mentored: Neurology resident

Training dates and degree: July 2004-June 2005

Research topic: Study on fMRI network activation during bimanual movements.

Present location: Cleveland Clinic Lou Ruvo Center for Brain Health. Las Vegas NV.

***Ashish Bhimani, MD***

Stage mentored: Medical Student

Training dates and degree: March 2002-April 2003

Research topic: Validation of Luria motor testing by fMRI.

Present location: Cardiovascular Medicine. UH University Hospitals, Cleveland, OH.

***Kirti Kulkarni, MD***

Stage mentored: Radiology intern

Training dates and degree: September 2002-August 2005

Research topic: Neuroanatomy applied to fMRI analysis

Present location: Faculty, Department of Radiology, University of Chicago

***Peter Zhi***

Stage mentored: Pre-med (undergraduate)

Training dates and degree: September 2005-May 2007

Research topic: Network modeling in fMRI. Stroke recovery.

Present location: Medical student at the New Jersey Medical School.

***Natasha Sansone***

Stage mentored: Undergraduate

Training dates and degree: September 2007 up to date.

Research topic: Structural equation modeling for motor control.

Present location: Graduate student at Loyola University.

***Leonardo Cerliani, PhD***

Stage mentored: PhD Student

Training dates and degree: November 2004-November 2005

Research topic: Functional anatomy for fMRI analysis.

Present location: Post-doctoral candidate at University Medical Center Groningen, Netherlands.

***Sunday Francis***

Stage mentored: Rotation during PhD training.

Training dates and degree: September-November 2003.

Research topic: EMG assessment of handedness.

Present location: Post-Doctoral Research Associate. UIC.

***Stacy Veldhuizen***

Stage mentored: Undergraduate

Training dates and degree: September 1994-August 1996.

Research topic: Histochemistry techniques in human brain.

Present location: Family Practice, Queen Creek, AZ.

**Bio 199 Students (UCI)**

Crystal Lavarias Llanes

Gary Kirakos

Wei Wen Chen

Cassandra Marie Andreyka

**Other Undergraduate Students (UCI)**

Laura Ng

Pramuk Sanjeewa

Stanley Chen

Ashwini Athreya

**UTDallas Undergraduate Students**

Wesley Cha

Sophia Boisvert

Jevin Kainikkara

Rithvik Kanaad

Ethan Burke

Julius Hubby

Nicole Koulov

Yash Sharma

Sanjev Srinivas

Yusra Alvi

**International Student**

Lucia Moya