

## C xCURRICULUM VITAE

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### **Education**

Ph.D. 1992 University of Texas at Austin, Behavioral Neuroscience Area of Psychology  
B.A. 1987 University of Texas at Austin, Psychology  
1983-1986 University of Missouri-Columbia, Psychology

### **Professional Experience**

2001- Assistant (2001-03), Associate (2003-08), Full (2008) Professor, Behavioral Neuroscience Area Head (2009-13), Psychology Department and Institute for Neuroscience, The University of Texas at Austin  
2013-2014 Bergeron Visiting Professor, Center for Brain Plasticity and Behavior, Georgetown University Medical Center, Washington, D.C.  
1996-2001 Assistant Professor, Psychology Department and Neurobiology and Behavior Program, University of Washington  
1993-1996 Postdoctoral Fellow, Behavioral Neuroscience and Biopsychology, Beckman Institute, University of Illinois, Mentor: William T. Greenough  
1987-1992 Graduate Student, Psychology Department and Neuroscience Institute, University of Texas at Austin, Mentor: Timothy Schallert

### **Researcher Profiles**

Google Scholar researcher profile: <https://scholar.google.com/citations?user=9hQ2fv8AAAAJ&hl=en>  
Publons/Web of Science ResearcherID: <https://publons.com/researcher/2831601/theresa-a-jones/>  
ORCID ID: <https://orcid.org/0000-0003-0906-6439>

## **AWARDS**

### **Research Funding**

#### Current

NINDS R37 NS056839 (Javits Award, Formerly RO1 NS056839 & RO1 MH/NS064586) *Neural mechanisms of compensating for brain damage*, PI, 2002-26

NINDS R21 NS101564 *Sex-dependent aging effects on cortical reorganization after stroke*. PI, 2017-20

NIH R01EB011556-01 *Optical Imaging of Baseline Blood Flow and Oxygenation During Stroke*. Andrew Dunn, PI, Jones, Co-I, 2010-20

#### Last 5 years

RO1 NS082518-01 *Microscale oxygenation mapping during stroke*. (Andrew Dunn, UT, P.I.), Co-I. 2013-18

NINDS NS078791 *Neurovascular mechanisms of time-dependencies in stroke rehabilitation*, Multi-PI (with Andrew Dunn, and Yi Zuo) and Contact PI, 2012-18

NIH R01 NS065866 *Cortical Stimulation to Enhance Motor Recovery following Traumatic Brain Injury* (DeAnna Adkins, MUSC, PI), Co-I, 2011-15

### **Selected Honors**

Donald B. Lindsley Award in Behavioral Neuroscience 1993  
Top 10 Great Dissertations, American Psychological Science, 2004  
Raymond Dickson Centennial Teaching Fellow, 2006  
American Psychology Association Fellow, 2006  
President's Associates Teaching Excellence Award, 2012

Association for Psychological Science Fellow, 2013  
Harry Ransom Award for Teaching Excellence, 2014  
Waggener Centennial Teaching Fellowship 2015-16

## PUBLICATIONS

### **Peer Reviewed Journal Articles (~98 total):**

- Barth TM, Jones TA & Schallert T (1990) Functional subdivisions of the rat sensorimotor cortex. *Behavioural Brain Research*, 39:73-95.
- Schallert T, Jones TA & Lindner MD (1990) Multilevel transneuronal degeneration after brain damage. Behavioral events and effects of anticonvulsant gamma-aminobutyric acid-related drugs. *Stroke*, 21(Suppl.III):143-146.
- Jones TA & Schallert T (1992) Overgrowth and pruning of dendrites in adult rats recovering from neocortical damage. *Brain Research*, 581:156-160.
- Jones TA & Schallert T (1992) Subcortical deterioration after cortical damage: effects of diazepam and relation to recovery of function. *Behavioural Brain Research*, 51:1-13.
- Schallert T & Jones TA (1993) "Exuberant" neuronal growth after brain damage in adult rats: the essential role of behavioral experience. *Journal of Neural Transplantation and Plasticity*, 4:193-198.
- Schallert T, Norton D & Jones TA (1993) A clinically relevant unilateral rat model of Parkinsonian akinesia. *Journal of Neural Transplantation and Plasticity*, 3:332-333.
- Jones TA & Schallert T (1994) Use-dependent growth of pyramidal neurons after neocortical damage. *Journal of Neuroscience*, 14:2140-2152.
- Kozłowski DA, Jones TA & Schallert T (1994) Pruning of dendrites and restoration of function after brain damage: Role of the NMDA receptor. *Journal of Restorative Neurology and Neuroscience*, 7:119-126.
- Jones TA & Greenough WT (1996) Ultrastructural evidence for increased contact between astrocytes and synapses in rats reared in a complex environment. *Neurobiology of Learning and Memory*, 65:48-56.
- Jones TA, Hawrylak N, & Greenough WT (1996) Rapid laminar-dependent changes in GFAP immunoreactive astrocytes in the visual cortex of rats reared in a complex environment. *Psychoneuroendocrinology*, 21:189-201.
- Jones TA, Kleim JA & Greenough WT (1996) Synaptogenesis and dendritic growth in the cortex opposite unilateral sensorimotor cortex damage in adult rats: a quantitative electron microscopic examination. *Brain Research*, 733:142-148.
- Jones TA, Klintsova AY, Kilman VL, Sirevaag AM & Greenough WT (1997) Induction of multiple synapses by experience in the visual cortex of adult rats. *Neurobiology of Learning and Memory*, 68:13-20.
- Jones TA, Hawrylak N, Klintsova AY & Greenough WT (1998) Brain damage, behavior, rehabilitation, recovery, and brain plasticity. *Mental Retardation and Developmental Disabilities Research Reviews*, 4:231-237.
- Kleim JA, Swain RA, Armstrong KA, Napper RMA, Jones TA & Greenough WT (1998) Selective synaptic plasticity within the cerebellar cortex following complex motor skill learning. *Neurobiology of Learning and Memory*, 69:274-289.
- Crowder KM, Gunther JM, Jones TA, Hale BD, Zhang HZ, Peterson MR, Scheller RH, Chavkin C & Bajjalieh SM (1999) Abnormal neurotransmission in mice lacking synaptic vesicle protein 2A (SV2A). *Proceedings of the National Academy of Sciences (USA)*, 96:15268-15273.
- Jones TA (1999) Multiple synapse formation in the motor cortex opposite unilateral sensorimotor cortex lesions in adult rats. *Journal of Comparative Neurology*, 414:57-66.
- Jones TA, Chu CJ, Grande LA & Gregory AD (1999) Motor skills training enhances lesion-induced structural plasticity in the motor cortex of adult rats. *Journal of Neuroscience*, 19:10153-10163.
- Bury SD, Adkins DL, Ishida JT, Kotzer CM, Eichhorn AC & Jones TA (2000) Denervation facilitates neuronal growth in the motor cortex of rats in the presence of behavioral demand. *Neuroscience*

*Letters*, 287:85-88.

- Bury SD, Eichhorn AC, Kotzer CM & Jones TA (2000) Reactive astrocytic responses to denervation in the motor cortex of adult rats are sensitive to manipulations of behavioral experience. *Neuropharmacology*, 39:743-755.
- Chu CJ & Jones TA (2000) Experience-dependent structural plasticity in cortex heterotopic to focal sensorimotor cortical damage. *Experimental Neurology*, 166:403-414.
- Adkins DL, Bury SD & Jones TA (2002) Laminar-dependent dendritic spine alterations in the motor cortex of adult rats following callosal transection and forced forelimb use. *Neurobiology of Learning and Memory*, 78:35-52.
- Roitman MF, Na E, Anderson G, Jones TA & Bernstein IL (2002) Induction of a salt appetite alters dendritic morphology in nucleus accumbens and sensitizes rats to amphetamine. *Journal of Neuroscience*, 22:1-5.
- Voorhies AC & Jones TA (2002) The behavioral and dendritic growth effects of focal sensorimotor cortical damage depend on the method of lesion induction. *Behavioural Brain Research*, 133:237-246.
- Bury SD & Jones TA (2002) Unilateral sensorimotor cortex lesions in adult rats facilitate motor skill learning with the "unaffected" forelimb and training-induced dendritic structural plasticity in the motor cortex. *Journal of Neuroscience*, 22:8597-8606.
- Sakata JT & Jones TA (2003) Synaptic mitochondrial changes in the motor cortex following unilateral cortical lesions and motor skills training in adult male rats. *Neuroscience Letters*. 337:159-162.
- Jones TA, Bury SD, Adkins DL, Allred RP, Luke LM & Sakata JT (2003) Importance of behavioral manipulations and measures in rat models of brain damage and brain repair. *Institute for Laboratory Animal Research Journal*. 44:144-152.
- Adkins-Muir DL & Jones TA (2003) Cortical electrical stimulation combined with rehabilitative training: enhanced functional recovery and dendritic plasticity following focal cortical ischemia in rats. *Neurological Research*, 25:780-787.
- Sorensen SA, Jones TA & Olavarria JF (2003) Neonatal enucleation reduces the proportion of callosal boutons forming multiple synaptic contacts in rat striate cortex. *Neuroscience Letters*. 351:17-20.
- Lindner MD, Gribkoff VK, Donlan NA & Jones TA (2003) Long-lasting functional disabilities in middle-aged rats with small cerebral infarcts. *Journal of Neuroscience*, 23:10913-10922.
- Kleim JA, Jones TA & Schallert T (2003) Motor enrichment and the induction of plasticity before or after brain injury. *Neurochemical Research*, 28:1757-1769.
- O'Donnell S, Donlan NA & Jones TA (2004) Mushroom body structural change is associated with division of labor in eusocial wasp workers (*Polybia aequatorialis*, Hymenoptera: Vespidae). *Neuroscience Letters*, 356:159-162.
- Bury SD & Jones TA (2004) Facilitation of motor skill learning by callosal denervation or forced forelimb use in adult rats. *Behavioural Brain Research*. 150:43-53.
- Adkins DL, Voorhies AC & Jones TA (2004) Behavioral and neuroplastic effects of focal endothelin-1 induced sensorimotor cortex lesions. *Neuroscience*, 128:473-486.
- Luke LM, Allred RP & Jones TA (2004) Unilateral ischemic sensorimotor cortical damage induces contralesional synaptogenesis and enhances skilled reaching with the ipsilateral forelimb in adult male rats. *Synapse*, 54:187-199.
- Allred RP & Jones TA (2004) Unilateral ischemic sensorimotor cortical damage in female rats: Forelimb behavioral effects and dendritic structural plasticity in the contralateral homotopic cortex. *Experimental Neurology*, 190:433-445.
- Woodlee MT, Asseo AM, Zhao X, Liu S-J, Jones TA & Schallert T (2005) Testing forelimb placing "across the midline" reveals distinct, lesion-dependent patterns of recovery in rats. *Experimental Neurology*, 191:310-317.
- Adkins DL & Jones TA (2005) D-amphetamine enhances skilled reaching after ischemic cortical lesions in rats. *Neuroscience Letters*, 380: 214-218.
- Hsu JE & Jones TA (2005) Time-sensitive enhancement of motor learning with the less-affected forelimb after unilateral sensorimotor cortex lesions in rats. *European Journal of Neuroscience*, 22:2069-2080.

- Allred RP, Maldonado MA, Hsu JE & Jones TA (2005) Training the "less-affected" forelimb after unilateral cortical infarcts interferes with functional recovery of the impaired forelimb in rats. *Restorative Neurology and Neuroscience*, 23:297-302.
- Adkins DL, Campos P, Quach D, Borromeo M, Schallert K & Jones TA (2006) Epidural cortical stimulation enhances motor function after sensorimotor cortical infarcts in rats. *Experimental Neurology*, 200:356-370
- Hsu JE & Jones TA (2006) Contralesional neural plasticity and functional changes in the less-affected forelimb after large and small cortical infarcts in rats. *Experimental Neurology*, 201:479-494.
- O'Donnell S, Donlan N & Jones TA (2006) Developmental and behavior associated differences in mushroom body structure in the eusocial paper wasp *Mischocyttarus mastigophorus*. *Journal of Neurobiology*, 67:39-46.
- O'Bryant A, Bernier B & Jones TA (2007) Abnormalities in skilled reaching movements are improved by peripheral an *Behavioural Brain Research*, 177: 298-307.
- Allred RP & Jones TA (2008) Maladaptive effects of learning with the less-affected forelimb after focal cortical infarcts in rats. *Experimental Neurology*, 210: 172-181
- Kleim JA & Jones TA (2008) Principles of experience-dependent neural plasticity: implications for rehabilitation after brain damage. *Journal of Speech Language and Hearing Research*, 51: S225-S239.
- Allred RP & Jones TA (2008) Experience--a double edged sword for restorative neural plasticity after brain damage. *Future Neurology*. 3:189-198.
- Allred RP, Adkins DL, Woodlee MT, Husbands LC, Maldonado MA, Kane JR, Schallert T & Jones TA (2008) The vermicelli handling test: a simple quantitative measure of dexterous forepaw function in rats. *Journal of Neuroscience Methods*, 170:229-244.
- Maldonado MA, Allred RP, Felthauer EL & Jones TA (2008) Motor skill training, but not voluntary exercise, improves skilled reaching after unilateral ischemic lesions of the sensorimotor cortex in rats. *Neurorehabilitation and Neural Repair*, 22:250-261.
- Adkins DL, Hsu JE & Jones TA (2008) Motor cortical stimulation promotes synaptic plasticity and behavioral improvements following sensorimotor cortex lesions. *Experimental Neurology*, 212:14-28.
- Jones TA, Allred RP, Adkins DL, Hsu JE, O'Bryant A & Maldonado MA (2009) Remodeling the brain with behavioral experience after stroke. *Stroke*, 40:S136-S138.
- Tennant KA & Jones TA (2009) Sensorimotor behavioral effects of endothelin-1 induced small cortical infarcts in C57BL/6 mice. *Journal of Neuroscience Methods*, 181:18-26.
- Jones TA, Donlan NA & O'Donnell S (2009) Growth and pruning of mushroom body Kenyon cell dendrites during worker behavioral development in the paper wasp, *Polybia aequatorialis* (Hymenoptera: Vespidae). *Neurobiology of Learning and Memory*, 92:485-495.
- Xu T, Yu X, Perlik AJ, Tobin WF, Zweig JA, Tennant K, Jones T & Zuo Y (2009) Rapid formation and selective stabilization of synapses for enduring motor memories. *Nature*, 462:915-919.
- Allred RP, Cappellini CH, & Jones TA (2010) The "good" limb makes the "bad" limb worse: experience-dependent interhemispheric disruption of functional outcome after cortical infarcts in rats. *Behavioral Neuroscience*, 124:124-132.
- Kim SY & Jones TA (2010) Lesion size-dependent synaptic and astrocytic responses in cortex contralateral to infarcts in middle-aged rats. *Synapse*, 64:659-671.
- Tennant KA, Asay AL, Allred RP, Ozburn AR & Jones TA (2010) The vermicelli and capellini handling tests: simple quantitative measures of dexterous forepaw function in rats and mice. *Journal of Visualized Experiments*, 4:pii. 2076.
- Tennant KA, Adkins DL, Donlan NA, Asay AL, Thomas N, Kleim JA & Jones TA (2011) The organization of the forelimb representation of the C57BL/6 mouse motor cortex as defined by intracortical microstimulation and cytoarchitecture. *Cerebral Cortex*, 21:865-876.
- Jones TA & Jefferson SC (2011) Reflections of experience-expectant development in repair of the adult damaged brain. *Developmental Psychobiology*, 53: 466-475. (invited, special issue)

- O'Bryant AJ, Allred RP, Maldonado MA, Cormack LK & Jones TA (2011) Breeder and batch-dependent variability in the acquisition and performance of a motor skill in adult Long-Evans rats. *Behavioural Brain Research*, 224:112-120.
- Kerr AL, Cheng S-Y & Jones TA (2011) Experience-dependent neural plasticity in the adult damaged brain. *Journal of Communication Disorders*, 44: 538-548. (invited, special issue).
- Upreti C, Skinner F, Pacheco LF, Patrida C, Otero R, Thakker R, Zhou Z, Veliskova J, Velisek L, Romanovicz D, Jones T, Stanton PK & Garrido-Sanabria ER (2012) Altered neurotransmitter release, vesicle recycling and presynaptic structure in the pilocarpine model of temporal lobe epilepsy. *Brain*, 135:869-885.
- Jones TA, Liput DJ, Maresh EL, Donlan N, Parikh TJ, Marlowe D & Kozlowski DA (2012) Use-dependent dendritic regrowth is limited after unilateral controlled cortical impact to the forelimb sensorimotor cortex. *Journal of Neurotrauma*, 29:1455-1466.
- Ozburn AR, Mayfield RD, Ponomarev I, Jones TA, Blednov YA & Harris RA (2012) Chronic self-administration of alcohol results in elevated DeltaFosB: comparison of hybrid mice with distinct drinking patterns. *BMC Neuroscience*, 13:130.
- Tennant KA, Adkins DL, Scalco MD, Donlan NA, Asay AL, Thomas N, Kleim JA & Jones TA (2012) Skill learning induced plasticity of motor cortical representations is time and age-dependent. *Neurobiology of Learning & Memory*, 98:291-302.
- Kim SY & Jones TA (2013) The effects of ceftriaxone on skill learning and motor functional outcome after ischemic cortical damage in rats. *Restorative Neurology and Neuroscience*, 31:87-97.
- Kazmi SMS, Salvaggio AJ, Estrada AD, Hemati MA, Shaydyuk NK, Roussakis E, Jones TA, Vinogradov SA & Dunn AK (2013) Three-dimensional mapping of oxygen tension in cortical arterioles before and after occlusion. *Biomedical Optics Express*, 4:1061-1073.
- Jones TA, Allred RP, Jefferson SC, Kerr AL, Woodie DA, Cheng S-Y & Adkins DL (2013) Motor system plasticity in stroke models: intrinsically use-dependent, unreliably useful. *Stroke*, 44:S104-S106.
- Kazmi SM, Parthasarathy AB, Song NE, Jones TA & Dunn AK (2013) Chronic imaging of cortical blood flow using Multi-Exposure Speckle Imaging. *Journal of Cerebral Blood Flow & Metabolism*, 33:798-808.
- Kerr AL, Wolke ML, Bell JA & Jones TA (2013) Post-stroke protection from maladaptive effects of learning with the non-paretic forelimb by bimanual home cage experience in C57BL/6 mice. *Behavioural Brain Research*, 252:180-187.
- Carrillo J, Cheng S-Y, Ko KW, Jones TA & Nishiyama H (2013) The long-term structural plasticity of cerebellar parallel fiber axons and its modulation by motor learning. *Journal of Neuroscience*, 33:8301-8307.
- Allred RP, Kim SY & Jones TA (2014) Use it and/or lose it-experience effects on brain remodeling across time after stroke. *Frontiers in Human Neuroscience*, 8:379 (1-8). (invited)
- Tennant KA, Kerr AL, Adkins DL, Donlan N, Thomas N, Kleim JA & Jones TA (2014) Age-dependent reorganization of peri-infarct "premotor" cortex with task-specific rehabilitative training in mice. *Neurorehabilitation and Neural Repair*, 29:193-202.
- Bell JA, Wolke ML, Ortez RC, Jones TA & Kerr AL (2015) Training intensity affects motor rehabilitation efficacy following unilateral ischemic insult of the sensorimotor cortex in C57BL/6 mice. *Neurorehabilitation & Neural Repair*, 29:590-598.
- Adkins DL, Ferguson L, Lancew S, Pevtsov A, McDonough K, Stamschror J, Jones TA & Kozlowski DA (2015) Combining multiple types of motor rehabilitation enhances skilled forelimb use following experimental traumatic brain injury in rats. *Neurorehabilitation & Neural Repair* 29:989-1000.
- Schrandt CJ, Kazmi SM, Jones TA & Dunn AK (2015) Chronic monitoring of vascular progression after ischemic stroke using multiexposure speckle imaging and two-photon fluorescence microscopy. *Journal of Cerebral Blood Flow & Metabolism*, 35:933-942.
- Kim SY, Allred RP, Adkins DL, Tennant KA, Donlan NA, Kleim JA & Jones TA (2015) Experience with the "good" limb induces aberrant synaptic plasticity in the perilesion cortex after stroke. *Journal of Neuroscience* 35:8604-8610. (chosen by publisher for press release)
- Jones TA & Adkins DL (2015) Motor System Reorganization After Stroke: Stimulating and Training Toward Perfection. *Physiology*, 30: 358-370.

- O'Bryant AJ, Adkins DL, Sitko AA, Combs H, Nordquist S & Jones TA (2016) Enduring poststroke motor functional improvements by a well-timed combination of motor rehabilitative training and cortical stimulation in rats. *Neurorehabilitation & Neural Repair*, 30: 143-154.
- Jefferson SC, Clayton E, Donlan NA, Kozlowski DA, Jones TA & Adkins DL (2016) Cortical stimulation concurrent with skilled motor training improves forelimb function and enhances motor cortical reorganization following controlled cortical impact. *Neurorehabilitation & Neural Repair* 30: 155-158
- Combs HL, Jones TA, Kozlowski DA & Adkins DL (2016) Combinatorial motor training results in functional reorganization of remaining motor cortex after controlled cortical impact in rats. *Journal of Neurotrauma*, 33: 741-747
- Palmateer J, Pan J, Pandya A, Martin L, Kumar X, Ofomata A, Jones TA, Gore AC, Schallert T & Hurn PD (2016) Ultrasonic vocalization in murine experimental stroke: A mechanistic model of aphasia. *Restorative Neurology & Neuroscience*, 34:287-295
- Edwardson MA, Wang X, Liu B, Ding L, Lane CJ, Park C, Nelson MA, Jones TA, Wolf SL, Winstein CJ, Dromerick AW (2017) Stroke lesions in a large upper limb rehabilitation trial cohort rarely match lesions in common preclinical models. *Neurorehabilitation & Neural Repair*. 31:509-520.
- Jones TA (2017) Motor compensation and its effects on neural reorganization after stroke. *Nature Reviews Neuroscience*. 18:267-280.
- Corbett D, Carmichael ST, Murphy TH, Jones TA, Schwab ME, Jolkkonen J, Clarkson AN, Dancause N, Weiloch T, Johansen-Berg H, Neilson M, McCullough LD, Joy MT (2017) Enhancing the alignment of the preclinical and clinical stroke recovery research pipeline: consensus-based core recommendations from the Stroke Recovery and Rehabilitation Roundtable translational working group. *International Journal of Stroke*. 12: 462-471. Reprinted in *Neurorehabilitation & Neural Repair* (2017) 31: 694-698.
- Miller DR, Hassan A, Jarret JW, Medina FA, Perillo EP, Hagan K, Kazmi SMS, Clark TA, Sullender CT, Jones TA, Zemelman BV & Dunn AK (2017) *In vivo* multiphoton imaging of a diverse array of fluorophores to investigate deep neurovascular structure. *Biomedical Optics Express*. 8: 3470-3481
- Kim SY, Hsu J-E, Husbands LC, Kleim JA & Jones TA (2018) Coordinated plasticity of synapses and astrocytes underlies practice-driven functional vicariation in peri-infarct motor cortex. *Journal of Neuroscience*. 38: 93-107
- Clark TA, Fu M, Dunn AK, Zuo Y, Jones TA. (2018) Preferential stabilization of newly formed dendritic spines in motor cortex during motor skill learning predicts performance gains, but not memory endurance. *Neurobiology of Learning and Memory*. 152: 50-60.
- Sullender CT, Mark AE, Clark TA, Vinogradov SA, Jones TA & Dunn AK (2018) Chronic imaging of cortical oxygen tension and blood flow after targeted vascular occlusion. *Neurophotonics*. 5(3): 035003
- Hengst JA, Duff MC & Jones TA (2019) Enriching communicative environments: leveraging advances in neuroplasticity for improving outcomes in neurogenic communication disorders. *American Journal of Speech-Language Pathology*. 28: 216-229.
- Clark TA, Sullender C, Kazmi SM, Speetles B, Williamson MR, Palmberg DM, Dunn AK & Jones TA (2019) Artery targeted photothrombosis widens the vascular penumbra, instigates peri-infarct neovascularization and models upper extremity impairments. *Scientific Reports*. 9: 2323.
- Williamson, MR, Jones, TA & Drew MR. (2019) Functions of subventricular zone neural precursor cells in stroke recovery. *Behavioural Brain Research*, 376: 112209.
- Bernhardt J, Hayward KS, Dancause N, Lannin NA, Ward NS, Nudo R, Farrin A, Churilov L, Boyd LA, Jones TA, Carmichael ST, Corbett D & Cramer SC (2019) A stroke recovery trial development framework: Consensus-based core recommendations from the second Stroke Recovery and Rehabilitation Roundtable. *International Journal of Stroke*, 14:792-802. Reprinted in *Neurorehabilitation and Neural Repair*, 33:959-969.
- Clark TA, Sullender C, Jacob D, Zuo Y, Dunn AK & Jones TA (2019) Rehabilitative training interacts with ischemia instigated spine dynamics to promote a lasting population of new synapses in peri-infarct motor cortex. *Journal of Neuroscience*, 39: 8471-8483

Carolina Estrada-Bonilla YC, de Souza-Tomé PAC, Faturi FM, Rafaella Mendes-Zambetta R, Lepesteur-Gianlorenço AC, Crotti GS, Jones TA & Russo TL. (2020) Compensatory neuromuscular junction adaptations of forelimb muscles in focal cortical ischemia in rats. *Brain & Behavior*, 10: e01472.

He F, Sullender C, Zhu H, Williamson MR, Li X, Zhao Z, Jones TA, Xie C, Dunn AK & Luan L. (2020) Multimodal mapping of neural activity and cerebral blood flow reveals long-lasting neurovascular dissociations after small-scale strokes. *Science Advances*, 6; eaba1933.

*Forthcoming:*

Williamson MR, Franzen RL, Fuertes CJA, Dunn Ak, Drew MR, Jones TA. A window of vascular plasticity coupled to behavioral recovery after stroke. In revision in response to peer reviews

Dutcher AM, Truong KV, Miller DD, Allred AP, Nudi E, Jones TA. Training in a cooperative bimanual skilled reaching task, the Popcorn Retrieval Task, improves unimanual function after motor cortical infarcts in rats. Submitted for peer review

*Journal Cover Illustrations:*

Jones TA & Greenough WT (1996) Schematic of astrocytic coverage of synaptic elements, *Neurobiology of Learning and Memory*, 65.

Jones TA, Kleim JA & Greenough WT (1996) Electron micrograph of synapses and dendrites in layer V of the rat motor cortex, *Brain Research*, 733.

Adkins DL, Bury SD & Jones TA (2002) Layer II/III and V pyramidal neurons in the forelimb representation region of the rat motor cortex. *Neurobiology of Learning and Memory*, 78.

Jones TA, Donlan NA & O'Donnell S (2009) Complex dendritic arborization of Kenyon cells in the mushroom bodies of the paper wasp. *Neurobiology of Learning and Memory*, 92.

Jones TA, Liput DJ, Maresh EL, Donlan N, Parikh TJ, Marlowe D & Kozlowski DA (2012) Cells expressing the growth inhibitory molecule, Nogo-A, in the rat cortex after controlled cortical impact injury. *Journal of Neurotrauma*, 29.

**Book Chapters and Reviews (non-peer reviewed)**

Schallert T, Jones TA, Weaver MS, Fulton RL, Shapiro LE, Crippens D & Fulton R (1992) Pharmacologic and anatomic considerations in recovery of function. In SL Hanson & DM Tucker (Eds.), *Physical Medicine and Rehabilitation: State of the Art Reviews: Vol. 6, Neuropsychological Assessment* (pp.375-393). Philadelphia: Hanley & Belfus Inc.

Swain RA, Armstrong KE, Comery TA, Humphreys AG, Jones TA, Kleim JA & Greenough WT (1995) Speculations on the fidelity of memories stored in synaptic connections. In DL Schacter, JT Coyle, GD Fischbach, M-M Mesulam & LE Sullivan (Eds.), *Memory Distortion* (pp. 274-297). Cambridge: Harvard University Press.

Black JE, Jones TA, Nelson CA & Greenough WT (1997) Chapter 2, Neuronal plasticity and the developing brain. In JD Noshpitz, NE Alessi, JT Coyle, SI Harrison & S Eth (Eds.), *Handbook of Child and Adolescent Psychiatry, Vol 6, Basic Psychiatric Treatment and Science* (pp. 31-53). New York: John Wiley & Sons.

Schallert T, Humm JL, Bland S, Jones TA, Kolb B, Aronowski J & Grotta J (2001) Activity-associated growth factor expression and related neuronal events in recovery of function after brain injury. In HH Batjer, LR Caplan, L Friberg & WL Young (Eds.), *Cerebrovascular Disease* (pp. 410-416). Armonk, NY: Futura Publishing Co. Inc.

Jones TA & Greenough WT (2002) Chapter 19, Behavioral experience-dependent plasticity of glial-neuronal interactions. In A Volterra, P Magistretti & PG Haydon (Eds.), *Glia in Synaptic Transmission* (pp. 248-265). Oxford University Press.

Jones TA & Adkins DL (2010) Behavioral influences on neuronal events after stroke, Section I, Chapter 3. In SC Cramer & RJ Nudo (Eds.) *Brain Repair after Stroke* (pp. 23-34). Cambridge, UK: Cambridge University Press.

Bayley M, Bednar M, Duncan P, Finklestein S, Jones TA, Kaira L, Kleim J, Nitkin R, Teasell R & Weiller C (2010) Brain recovery and rehabilitation: harnessing the regenerative powers of the brain and the

- individual. In: Hachinski V, Donnan GA, Gorelick PB, Hacke W, Cramer SC & 48 other members of the Stroke Synergium. *Stroke: working toward a prioritized world agenda*. *Stroke*, 41: 1084-1099. Reprinted in: *International Journal of Stroke*, 5: 238-256 and *Cerebrovascular Disease*, 30:127-147.
- Jones TA (2011) Cortical reorganization due to experience, Chapter 3: Experience dependent changes in non-humans. In SA Raskin (Ed.), *Neuroplasticity and Neurorehabilitation*. New York: Guilford Publications, Inc.
- Kozlowski DA & Jones TA (2012) Plasticity and recovery of the injured brain, Chapter 15. In C Moranti-Kossmann, R Raghupathi & A Maas (Eds.), *Traumatic Brain and Spinal Cord Injury*. Cambridge University Press.
- Zuo Y, Yu X, Tennant K & Jones T (2013). *In vivo* imaging of synapse plasticity in the mouse motor cortex. *Methods in Molecular Biology*, 1010:45-57.
- Jones TA (2017) Beyond Pons et al.: Massive cortical reorganization after sensory deafferentation in adult macaques. In B Kolb & I Whishaw (Eds.), *Brain & Behavior Revisiting the Classic Studies*. Sage Publications Ltd.
- Hirsh T, Barthel M, Aarts, P, Chen, Y-A, Freivogel S, Johnson MJ, Jones TA, Jongsma, MLA, Maier M, Punt D, Sterr A, Wolf SL, Heise K-F (2020). Operationalization of the learned non-use phenomenon – A Delphi study. *MedRxiv* preprint: <https://doi.org/10.1101/2020.03.18.20037374>

**Conference Proceedings Abstracts, Last 3 Years (out of >100 total):**

- Clark T, Sullender C, Dunn A, Jones T (2017) Targeted photothrombotic stroke to mouse motor cortex instigates sustained increases in dendritic spine turnover that continue after impairments improve. *2017 Neuroscience Meeting Planner*, 214.08. Online.
- Valenzuela KS, Langner S, Blaker M, Brewer S, Jones TA, Schallert T (2017) Axonal remodeling induced by rehabilitative training on the isometric pull task after middle cerebral artery occlusion in the rat. *2017 Neuroscience Meeting Planner*. 483.0. Online.
- Nudi E, Nielson C, Jones, TA (2018) Towards a reproduceable rodent model of lasting upper extremity impairments after subcortical white matter infarcts. *2018 Neuroscience Meeting Planner*. 054.27. Online.
- Williamson MR, Drew MR, Jones TA (2018) Influence of subventricular zone-derived precursors on neurovascular remodeling after ischemic cortical lesions. *2018 Neuroscience Meeting Planner*. 136.03. Online.
- Barksdale BR, Lee AK, Miranda-Sohrabji DF, Jones TA (2018) Effects of remote limb ischemic conditioning in conjunction with rehabilitation training after motor cortical infarcts in rats. *2018 Neuroscience Meeting Planner*. 136.03. Online.
- Valenzuela KS, Blaker M, Cohen N, Cook B, Bhandari D, Jones TA, Schallert T (2018) Nonparetic forelimb training does not interfere with recovery of paretic forelimb strength after experimental middle cerebral artery occlusion. *2018 Neuroscience Meeting Planner*. 385.07. Online.
- Williamson MR, Le S, Franzen L, Dunn AK, Drew MR, Jones TA (2019) Subventricular zone-derived neural precursor cells support tissue remodeling after ischemic cortical lesions. *2019 Neuroscience Meeting Planner*. 215.22. Online.
- He F, Sullender C, Zhu H, Jones TA, Xie C, Dunn A, Luan L (2019) Longitudinal multimodal mapping of neural activity and blood flow reveals neurovascular dissociations in an awake mouse model of microinfarcts. *2019 Neuroscience Meeting Planner*. 391.14. Online.
- Barksdale BR, Lee AK, Rosow JL, Nicot-Carsonis MS, Miranda-Sohrabji DF, Jones TA (2019) Effects of remote limb ischemic conditioning in conjunction with rehabilitation training after acute and chronic motor cortical infarcts in rats. *2019 Neuroscience Meeting Planner*. 478.18. Online.
- Miranda-Sohrabji D, Kumar S, Nudi E, Donlan N, Jones TA (2019) Coordinated asymmetrical bimanual reaching strategies used by C57/BL6 mice in a novel bimanual skilled reaching task. *2019 Neuroscience Meeting Planner*. 657.15. Online.

**INVITED LECTURES AND SYMPOSIA (last 3 years)**

*Neural substrates of functional vicariation after stroke*, 2017, University of Montreal

*Motor system organization after stroke – stimulating and training towards perfection*, 2017, Oslo and Akershus University Motor Learning Symposium, Norway  
*Neural plasticity after acquired brain damage, "learning" to drive it in optimal directions*, 2017 Clinical Aphasiology Conference, Snowbird, Utah  
*Behaviorally-driven competition in cortical remodeling after stroke*, 2017, University of Ottawa  
*Learning to remodel the adult damaged brain*, 2017, West Virginia University  
*Experience-driven competition in neural reorganization after stroke*, Burke Medical, Cornell, 2018  
*Neural reorganization after stroke: "learning" to drive it in optimal directions*, keynote address, 2018 Canadian Partnership for Stroke Recovery Annual Meeting, Ottawa  
*Models of post-stroke motor recovery*, in *Plasticity and the Promise of Recovery after Stroke*, 2019 International Stroke Conference, Honolulu  
*When & how much rehabilitation are optimal? Interrelated questions with interrelated brain mechanisms*, Third Congress on Neurorehabilitation and Neural Repair, 2019, Maastricht, The Netherlands  
*(Re) Learning to remodel the adult damaged brain*, 2019, University of Wisconsin-Milwaukee

## **COMMITTEES AND SERVICE**

### **Regional, National and International Level Committees**

National Institutes of Health Study Sections: Clinical Neuroscience and Disease (CND)/Acute Neural Injury and Epilepsy (ANIE) Study Section, Chartered Member (2006-10); Temporary Reviewer (2004-06, 2012); Brain Disorders and Clinical Neuroscience (BDCN) Study Section, Temporary Reviewer (2005, 2014-16), Brain Injury and Neurovascular Pathologies (BINP), Chartered Member (2016-20)  
American Society for Neurorehabilitation, Board Nominating Committee, 2015-18  
Faculty for Undergraduate Research Travel Award Reviewer, 2017  
First Stroke Recovery and Rehabilitation Round Table, Translational Working Group, 2016  
External reviewer, Heart & Stroke Foundation Canadian Partnership for Stroke Recovery (HSFCPSR), 2016  
LoneStar Preclinical Stroke Consortium, 2014-2015  
UT System Neuroscience Council, 2014-2015  
American Psychological Association (APA) Liaison to Society for Neuroscience, 2011-14  
International Stroke Conference, Abstract Grading Committee, 2012-13  
Stroke Program Review Group, National Institute of Neurological Disorders and Stroke, 2001, 2006, 2011  
APA Committee on Animal Research and Ethics (CARE) 2006-10  
Stem Cell Therapies as an Emerging Paradigm in Stroke (STEPS) II Working Group, 2010  
International Stroke Synergium, Brain Recovery and Rehabilitation Working Group, 2010  
Society for Neuroscience UT Austin Chapter, Secretary 2004-2006, President, 2007-2010  
American Heart Association, Texas Affiliate's Research Allocations & Advisory Committee, 2006-2007; South Central Affiliate Research Committee, 2007-10  
American Heart Association Western Review Consortium, Peer review member 2005-09  
APA Dissertation Research Award Committee, 2008  
National Neurotrauma Society Program Committee, 2005-06, Abstract Review Committee, 2006, 2009  
Co-Chair, Symposium on Behaviour-Induced Neural Events after Brain Injury, Internet World Congress on Biomedical Sciences 1998

### **Departmental and University Committees (select)**

Psychology Department Executive Committee, 2020-  
Institutional Animal Care and Use Committee (IACUC), 2014-19  
Institute for Neuroscience, Curriculum Committee, 2010-19  
Psychology Department Graduate Admissions Committee, 2015-19

Waggoner Center Faculty Search Committee 2017-18  
 Institute for Neuroscience, Annual Retreat Co-organizer, 2016-17  
 College of Liberal Arts Undergraduate Research Fellowship Reviewer, 2017  
 College of Liberal Arts Teaching Awards Review Committee, 2012-2016  
 UT Selection Panel for Brain Research Foundation's Scientific Innovations Award, 2015  
 College of Liberal Arts Family Weekend, Mini-class lecturer, 2014  
 Psychology Department Mentoring Committee Chair, 2013  
 College of Natural Sciences Dean Search Committee, 2011-12  
 College of Liberal Arts Promotions and Tenure Committee, 2010  
 First Annual UT NeuroOlympics Competition, Volunteer Judge, 2010  
 Behavioral Neuroscience Search Committee, Chair, 2007-08  
 Institute for Neuroscience, Bylaws Revision Committee, 2007-08  
 Behavioral Neuroscience Search Committee, 2006-07  
 Psychology Department Steering Committee, 2006-07  
 Neuroscience Training Grant Executive Committee, 2004-06  
 Assistant Graduate Advisor, Neuroscience Institute, 2003-07  
 Neuroscience Institute Scholarship Committee, 2006  
 Psychology Department Executive Committee, 2005-06  
 Neuroscience Institute Qualifying Exams, Behavioral Neuroscience Chair, 2005-06  
 Neuroscience Institute Executive Committee, Member-at-Large, 2003-06  
 Psychology Department Overhead and Expenditures, 2005  
 Center for Learning and Memory Faculty Search Committee, 2004-05  
 Psychology Department Intellectual Enrichment Committee, 2003-05  
 Neurobiology and Behavior Training Grant Executive Committee, 2003-05  
 Neuroscience Institute Director Search Committee, 2002-04  
 Neuroscience Institute Graduate Recruitment and Admissions Committee, 2002-04  
 UT Psychology Alumni Conference and Reunion, co-chair, 2002-03

### **Editorial Boards**

*Behavioral Neuroscience*  
*Frontiers in Behavioral Neuroscience*  
*Frontiers in Systems Neuroscience*  
*Neural Plasticity*  
*Restorative Neurology and Neuroscience*  
*Stroke*

### **Professional Organizations**

Society for Neuroscience	
American Psychological Society	American Psychological Association, Div. 3, 6
American Heart/Stroke Association	National Neurotrauma Society
American Society for Neurorehabilitation	Faculty for Undergraduate Neuroscience (FUN)

### **TEACHING AND MENTORING**

#### **Repeating Courses**

*Honors Research I & II (2 course series)*, Instructor, upper division undergraduate level, 2008-  
*Quantifying Brain Structure*, Instructor, graduate level, 1998-  
*Neural Plasticity and Behavior (formerly "Neurobiology of Learning and Memory")*, Instructor, all levels,  
 1996-

#### **Other Courses and Seminars:**

*Biopsychology*, Instructor, lower division undergraduate level, 2001-2008  
*Seminar in Behavioral Neuroscience ("Area Seminer")*, Organizer (sporadic semesters), graduate level,  
 2003-  
*Principals of Neuroscience II*, Co-Instructor (2 week section), graduate level, 2003-06

*Methods in Behavioral Neuroscience*, Instructor, graduate level, 2005  
*Seminar in Neural Plasticity and Brain Damage*, Organizer, all levels, 1997-2001, University of Washington (UW)  
*Seminar in Physiological Psychology ("Area Seminar")*, Organizer, graduate level, 1998-2000, UW  
*Physiological Psychology*, Instructor, lower division undergraduate level, 1997-2000, UW  
*Introduction to Neurobiology*, Co-Instructor, graduate level, 2000, UW  
*Journal Club in Learning and Motivation*, Organizer, graduate level, 1999, UW  
*Advances in the Neurobiology of Learning and Memory*, Instructor, all levels, 1998, UW  
*Proseminar in Neurobiology and Behavior*, Co-instructor, graduate level, 1997, UW

### **Mentees**

*\*funded by a national-level research fellowship (NRSA or similar)*

#### **Postdoctoral trainees:**

\*Stephanie Jefferson, PhD, 2009-2015 (Current position: Regional Account Manager, NanoString Technologies)  
\*Shao-Ying (Ian) Cheng, PhD, 2010-2013 (Current position, University of Texas at Austin, Instructor)  
\*Abigail Kerr, PhD, 2010-12 (Current position: tenure track Asst. Prof., Illinois Wesleyan)  
Jon Sakata, PhD, 2002-03 (Current position: Assoc. Prof., McGill)

#### **Graduate students (as primary advisor)**

##### Current Doctoral Students:

Michael Williamson, Neuroscience Institute Program, 2016-  
Evan Nudi, Behavioral Neuroscience Program, 2014-

##### Former Doctoral Students (and subsequent positions):

Bryan Barksdale, MD/PhD Program, 2015-2020  
Taylor Clark, Neuroscience Institute Program, 2013-18 (postdoctoral fellow, UC San Diego)  
\*Kelly Tennant, Neuroscience Institute, 2007-11 (postdoctoral fellow, UVIC)  
Soo Young Kim, Neuroscience Institute, 2006-11 (postdoctoral fellow, UCSF)  
\*Amber O'Bryant, Neuroscience Institute, 2004-11 (postdoctoral fellow, UT Southwestern)  
\*Monica A. Maldonado, Neuroscience Institute, 2004-10) (Associate Director, Student Activities, Florida Atlantic University)  
\*Rachel P. Allred, PhD, Psychology, 2002-09 (research fellow, UT)  
J. Edward Hsu, MD, PhD, Neuroscience Institute 2003-07 (neurosurgical residency, UTHSCH)  
DeAnna Adkins, PhD, Neuroscience Institute, 1998-2005 (Assoc. Prof., Medical University of South Carolina)  
Scott Bury, PhD, Psychology, University of Washington 1997-2002 (Director, Office of Animal Welfare, Vanderbilt )

##### Former Masters Students:

Colleen Capellini, MA, Neuroscience Institute, 2009 (training program in Communication Sciences and Disorders, UT)  
Aloysha Asseo, MA, Neuroscience Institute 2002-04 (laboratory manager, University of Puerto Rico)  
Jessica Lubs, Behavioral Neuroscience Program, 2012-14 (training program in Nursing)  
Daniel Woodie, Behavioral Neuroscience Program, 2011-15 (masters program in Statistics, UT Austin)

##### Graduate Rotation Students:

Taylor Clark, 2013; Malerie Wolke, 2012; Kylie Huckleberry, 2011; Erik Felthouser, 2005; Naomi Hester, 2005; Brenda Houcke, 2005; Elaine Ellerton, 2004; Lynn Almli, 2004; Brian Bernier, 2004; Karen Thames, 2003; Linslee Luke, 2001-03; Julie Harris, 2000-01; Staci Sorenson, 2000-01; Ann Voorhies, 1999-2001; Jun Kim, 1997; Mark Ruffo, 1996

#### **Undergraduate research assistants** (Subsample of >100 mentored in Jones' lab)

(honors and research awards), *Graduate ("Grad") or Medical ("Med") Training Program*,  
authorship on: \*published abstract; †peer-reviewed journal article

<p>Allison Ahrens, <i>UT Grad</i>  Nirav Amin, <i>UNT Med</i>  Leor Azoulay, <i>Technion Med</i>  Jared Bell*†, (FUN travel award, UT Undergrad Research Fellow), <i>Texas Tech Health Sci Ctr Med</i>  Andrea Betesh, <i>U Miami Med</i>  Mark Borromeo†, <i>UT Southwestern Grad</i>  Pete Campost†, <i>UTSA Grad</i>  Karen Cuartas, <i>UT El Paso Med</i>  Catherine Chu*†, (Mary Gates Foundation Fellow, Goldwater Scholar), <i>Harvard Med</i>  Hannah Combs*†, (Psychology Honors), <i>U Kentucky Grad</i>  Joel Dahms*, <i>UCLA Grad</i>  Collin Diffie*, (UT Undergrad Res Fellow)  Tony Dutcher*, <i>UT Austin INS Grad</i>  Alethea Eichorn*†, (Mary Gates Fellow)  Truc Garcia, (Psychology Honors, UT Undergrad Res Fellow)  Cindy Grande*†, <i>U Washington Med</i>  Jae Young Han, <i>Memorial Hermann Med</i>  Seth Hays*, <i>UT Southwestern Grad, UT Dallas Asst. Prof.</i>  Jay Ishida*†, <i>U Hawaii Med</i>  Jurate Lasiene*, <i>UW Grad</i></p>	<p>Erin Maresh*†, (Psychology Honors), <i>U Virginia Grad</i>  Angelica McPartlin*, (Endowed Presidential Scholarship), <i>UT Southwestern Med</i>  Dallas Miller*, <i>UNT Med</i>  Taliah Muhammad*, (UT Undergrad Res Fellow)  Sarah Nordquist*†, <i>UT Grad</i>  Toral Parikh*, (UT Undergrad Res Fellow, Plan II Honors), <i>UTHSCSA Med</i>  Samuel Pedigo, <i>U Washington Grad</i>  Maya Pinjala*, <i>Texas Tech Grad</i>  David Quach†, (UT Undergrad Res Fellow), <i>Northwestern Grad</i>  Matt Scalco*, <i>SUNY UB Grad</i>  Kellan Schallert†, <i>UTHSC Med</i>  Austen Sitko*†, (UT Undergrad Research Fellow, Psychology Honors), <i>Columbia Grad</i>  Michael Smith, <i>Yale Grad</i>  Ashley Smith*, <i>UT Lubbock Med</i>  Thi Tran, <i>UT Southwestern Grad, UCSF postdoctoral fellow</i>  Oscar (Khangy) Truong*, (UT Undergrad Res Fellow)  Jennifer Whiddon, (Psych. Honors, URF), <i>U Washington Grad</i>  Sherry Yao, <i>UT Southwestern Med</i></p>
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**Jones Lab Homepage:** <https://labs.la.utexas.edu/jones/>