

UNIVERSITY OF PENNSYLVANIA - SCHOOL OF MEDICINE
Curriculum Vitae

Date: April 2015

Geoffrey K Aguirre, M.D., Ph.D.

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Narrative description:

I am an Associate Professor of Neurology at the University of Pennsylvania and a cognitive neuroscientist. My clinical and research work concerns the organization of the brain for mental operations, in particular visual ability. Using functional MRI, a non-invasive tool for measuring brain activity, I study how neurons are normally arranged to represent and store visual information. I use these techniques to understand as well how blindness changes the brain. As a clinician, I treat patients with a variety of disturbances of thinking and memory, with my practice informed by recent insights into the organization of the brain for these functions. I study the methodological development and application of imaging techniques. I am the Associate Director of the Center for Neuroscience and Society and a Senior Consultant to the MacArthur Foundation Research Network on Law and Neuroscience, with a focus upon the use and misuse of brain imaging data. Finally, I am the Associate Director of the Neurology Residency program at the Hospital of the University of Pennsylvania.

Office Address: 3 West Gates
Hospital of the University of Pennsylvania
Philadelphia, PA 19104-4283

Education:

1988-92 B.A. Princeton University (Politics)
Thesis: Congressional control of NIH funding priorities during the AIDS crisis

1992-01 M.D. University of Pennsylvania

1992-00 Ph.D. University of Pennsylvania (Neuroscience)
Thesis: Neural components of topographical orientation

Postgraduate Training and Fellowship Appointments:

2001-02 Intern in Medicine, Pennsylvania Hospital, Philadelphia

2002-04 Resident in Neurology, Hosp. of the Univ of Pennsylvania, Philadelphia

Faculty Appointments:

2004-2013 Assistant Professor of Neurology, Department of Neurology
University of Pennsylvania School of Medicine

2013-present Associate Professor of Neurology, Department of Neurology
University of Pennsylvania School of Medicine

Specialty Certification:

2005-present American Board of Neurology

Licensure: Pennsylvania

Awards, Honors and Membership in Honorary and National Societies:

2013 Elected to Philadelphia College of Physicians

2012 Elected to the American Neurological Association

2011 Appointed Senior Consultant to the MacArthur Foundation Research Network on Law and Neuroscience

2008 Member of the Neuroimaging Steering Committee of the Hastings Center for Bioethics (2008-2014)

2004 Samuel Zeritsky award for excellence in research (Univ. of Penn)

2004 Penn Pearls award for excellence in medical student education (Univ. of Penn)

2001 Intern of the Year (Pennsylvania Hospital)

2001 Thomas Bond Prize for the best research by a house officer (Pennsylvania Hospital)

2000 Eric Corey Raps Memorial Prize for excellence in clinical neurology (Univ. of Penn)

1999 World Technology Award Finalist in Health and Medicine

1998 Louis B. Flexner prize for the best dissertation research in the neurosciences (Univ. of Penn)

1998 G. Milton Shy Award for the best essay in clinical neurology (American Academy of Neurology)

Memberships in Professional and Scientific Societies:

National Societies: American Academy of Neurology
Society for Neuroscience
Vision Sciences Society
Organization for Human Brain Mapping

Editorial Positions:

2004-2009 Associate Editor, Neuroscience Letters

2009-2012 Editorial Board, NeuroImage

Major Teaching and Clinical Responsibilities at the University of Pennsylvania and Affiliated Hospitals:

1. Attending rounds at the Hospital of the University of Pennsylvania 6 weeks/year
2. Behavioral Neurology continuity clinic ½ day / week
3. Residents clinic attending 16 days / year

Additional Teaching and Administrative Roles at the University of Pennsylvania:

1. Member Neuroscience Graduate Group
2. Member Psychology Graduate Group
3. Associate Director of the Center for Neuroscience and Society
4. Associate Director of the Neurology Residency Program
5. Vision Research Center Executive Committee and director of the Instrumentation Core
6. Center for Functional Neuroimaging Executive committee and director of the Data Analysis Core
7. Organizer of the annual Elliott Lectureship in Behavioral Neurology
8. Lecturer in the annual Neuroscience Boot Camp course
9. Lecturer in the annual Neurology Board review course (G. Liu, organizer)
10. Lecturer in the Brain and Behavior medical school course

Lectures by Invitation: (Please list only those in the past 5 years. *upcoming)

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|-------------|---|
| *June, 2015 | Faculty-at-large member for the NINDS/AUPN/ANA/CNS Symposium on Combining Clinical and Research Careers, Washington, DC |
| *June, 2014 | “Neuroscience for legal decision makers”, Illinois Advanced Judicial Academy, <i>Science in the Courtroom</i> , Champaign, IL |
| *May, 2015 | “The elusive neuroimaging marker of mild traumatic brain injury”, Traumatic Brain Injury Interdisciplinary Symposium, Franklin Institute, Philadelphia, PA |
| March, 2014 | “Neuroimaging 2.0”, Hall Center for Law and Health Event/Indiana Health Law Review Symposium: Neuroscience and Law: Injury, Capacity and Illness, Indianapolis, IN |
| Feb, 2014 | "Melanopsin and S-cone responses in the human pupil and brain", Vision Center Annual Retreat, University of Pennsylvania, Philadelphia PA |
| Feb, 2014 | "Neurons to Neuroimaging", MacArthur Foundation Colloquium on Law, Neuroscience and Criminal Justice, Nashville, TN |
| Nov, 2013 | "Measuring Visual Cortex without Vision", Oxford University, Oxford |
| June, 2013 | "Measuring Visual Cortex without Vision", Optical Society of America Fall Vision Meeting, Houston TX |
| June, 2013 | "Inferring neuronal tuning from fMRI: adaptation and pattern information", Advanced fMRI Course, Organization for Human Brain Mapping Annual Meeting, Seattle, Washington |

- April, 2013 "Measuring Visual Cortex without Vision", Princeton University Neuroimaging Group, Princeton NJ
- April, 2013 "Primer of Behavioral Neurology", American Academy of Neurology, New Orleans, LA
- Oct, 2012 "The Behavioral Neurology of Vision", Neurology Grand Rounds, University of Maryland, Baltimore, MD
- Sept, 2012 "Dissecting neural similarity: scale, prototypes, and interactions", Cognitive Science Department colloquia, Johns Hopkins University, Baltimore, MD
- Sept, 2012 "Dissecting neural similarity: scale, prototypes, and interactions", Basque Center on Cognition, Brain and Language, San Sebastian, Spain
- May, 2012 "Similarity and dimensions in object perception", Concepts, Actions, and Objects Annual Meeting. Center for Mind and Brain Sciences, Rovereto, Italy.
- April, 2011 "Primer of Behavioral Neurology", American Academy of Neurology, New Orleans, LA
- February, 2011 "Measuring visual cortex without vision", Neurology Grand Rounds, Jefferson University, Philadelphia, PA
- Dec, 2011 "Measuring visual cortex without vision", Shriner's Research Seminar, Temple University, Philadelphia, PA
- October, 2011 "Mind reading: theory and practice", Nerd Nite, Philadelphia, PA
- May, 2011 "Measuring visual cortex without vision", Chinese Academy of Sciences, Beijing, China
- April, 2011 "Cross-modality representation and blindness", Mahoney Institute of Neurological Science Annual Retreat, University of Pennsylvania, Philadelphia, PA
- April, 2011 "Structure and Function in Behavioral Neurology: Visual Processing", American Academy of Neurology, Honolulu, HI
- March, 2011 "Cortical vision in the canine and human, lost and found", Grand Rounds, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA
- Dec, 2010 "Neural representation and visual similarity", Yale Cognitive Neuroscience Seminar Series, New Haven, CT
- Nov, 2010 "Prototype and similarity: Two sides of the same coin", Berkeley Seminar on Visual Representation, Berkeley CA
- April, 2010 "Structure and Function in Behavioral Neurology: Visual Processing", American Academy of Neurology, Toronto, Canada
- March, 2010 "An introduction to memory systems," Seminar on Law and Neuroscience, Boston, MA
- June, 2009 "Repetition suppression and continuous carry-over designs", Advanced fMRI Educational Course at the Organization for Human Brain Mapping Annual meeting, San Francisco, CA
- June, 2009 "Relating perceptual and neural similarity", Vanderbilt University, Nashville, TN
- May, 2009 "Visual Structure and function correlations in behavioral neurology", American Academy of Neurology Course, Seattle, WA

- March, 2009 “The sausage factory: Behind the scenes of a neuroimage,” Seminar on Law and Neuroscience, New York, NY
- March, 2009 “The geometry of neural similarity spaces”, Co-organizer of symposium entitled “Representational similarity analysis - characterizing visual population codes for shapes, objects, and faces.” Cognitive Neuroscience Society Annual Meeting, San Francisco, CA

Bibliography: (Include only relevant publication categories. While the precise format can be individualized, each entry should contain all authors and inclusive page numbers.)

Research Publications, peer reviewed (print or other media):

1. **GK Aguirre**, JA Detre, DC Alsop, M D'Esposito. (1996). The parahippocampus subserves topographical learning in man. *Cerebral Cortex*, 6, 823-829.
2. JA Detre, DC Alsop, **GK Aguirre**, MR Sperling. (1996). Coupling of cortical and thalamic ictal activity in human partial epilepsy: demonstration by functional magnetic resonance imaging. *Epilepsia*, 37, 657-661.
3. LT Zorrilla, **GK Aguirre**, E Zarahn, TD Cannon, M D'Esposito. (1996). Activation of the prefrontal cortex during judgments of recency: a functional MRI study. *Neuroreport*, 7, 2803-2806.
4. **GK Aguirre**, M D'Esposito. (1997). Environmental knowledge is subserved by separable dorsal/ventral neural areas. *Journal of Neuroscience*, 17, 2512-2518.
5. E Zarahn, **GK Aguirre**, M D'Esposito. (1997). Empirical analyses of BOLD fMRI statistics. I. Spatially unsmoothed data collected under null-hypothesis conditions. *Neuroimage*, 5, 179-197.
6. **GK Aguirre**, E Zarahn, M D'Esposito. (1997). Empirical analyses of BOLD fMRI statistics. II. Spatially smoothed data collected under null-hypothesis and experimental conditions. *Neuroimage*, 5, 199-212.
7. M D'Esposito, JA Detre, **GK Aguirre**, M Stallcup, DC Alsop, LJ Tippet, MJ Farah. (1997). A functional MRI study of mental image generation. *Neuropsychologia*, 35, 725-730.
8. M D'Esposito, E Zarahn, **GK Aguirre**, RK Shin, P Auerbach, JA Detre. (1997). The effect of pacing of experimental stimuli on observed functional MRI activity. *Neuroimage*, 6, 113-121.
9. SL Thompson-Schill, M D'Esposito, **GK Aguirre**, MJ Farah. (1997). Role of left inferior prefrontal cortex in retrieval of semantic knowledge: a reevaluation. *Proceedings of the National Academy of Sciences of the United States of America*, 94, 14792-14797.
10. E Zarahn, **GK Aguirre**, M D'Esposito. (1997). A trial-based experimental design for fMRI. *Neuroimage*, 6, 122-138.

11. **GK Aguirre**, E Zarahn, M D'Esposito. (1998). An area within human ventral cortex sensitive to "building" stimuli: evidence and implications. *Neuron*, 21, 373-383.
12. **GK Aguirre**, E Zarahn, M D'Esposito. (1998). The variability of human BOLD hemodynamic responses. *NeuroImage*, 8, 360-369.
13. **GK Aguirre**, E Zarahn, M D'Esposito. (1998). The inferential impact of global signal covariates in functional neuroimaging analyses. *NeuroImage*, 8, 302-306.
14. **GK Aguirre**, E Zarahn, M D'Esposito. (1998). A critique of the use of the Kolmogorov-Smirnov (KS) statistic for the analysis of BOLD fMRI data. *Magnetic Resonance in Medicine*, 39, 500-505.
15. M D'Esposito, **GK Aguirre**, E Zarahn, D Ballard, RK Shin, J Lease. (1998). Functional MRI studies of spatial and nonspatial working memory. *Cogn Brain Res*, 7, 1-13.
16. M D'Esposito, D Ballard, **GK Aguirre**, E Zarahn. (1998). Human prefrontal cortex is not specific for working memory. *NeuroImage*, 8, 274-282.
17. **GK Aguirre**, E Zarahn, M D'Esposito. (1998). Neural components of topographical representation. *PNAS USA*, 95, 839-846.
18. JA Detre, L Maccotta, D King, DC Alsop, G Glosser, M D'Esposito, E Zarahn, **GK Aguirre**, JA French. (1998). Functional MRI lateralization of memory in temporal lobe epilepsy. *Neurology*, 50, 926-932.
19. **GK Aguirre**, MJ Farah. (1998). Human visual object recognition: what have we learned from neuroimaging? *Psychobiology*, 26, 322-332.
20. M D'Esposito, E Zarahn, **GK Aguirre**. (1999). Event-related functional MRI: Implications for cognitive psychology. *Psychological Bulletin*, 125.
21. MJ Farah, **GK Aguirre**. (1999). Imaging visual recognition: PET and fMRI studies of the functional anatomy of human visual recognition. *Trends in Cognitive Sciences*, 3, 179-186.
22. SL Thompson-Schill, **GK Aguirre**, M D'Esposito, MJ Farah. (1999). A neural basis for category and modality specificity of semantic knowledge. *Neuropsychologia*, 37, 671-676.
23. **GK Aguirre**, R Singh, M D'Esposito. (1999). Stimulus inversion and the responses of face and object-sensitive cortical areas. *NeuroReport*, 10, 189-194.
24. E Zarahn, **GK Aguirre**, M D'Esposito. (1999). Temporal isolation of the neural substrates of spatial mnemonic processing with fMRI. *Cognitive Brain Research*, 7, 255-268.
25. M D'Esposito, E Zarahn, **GK Aguirre**, B Rypma. (1999). The effect of normal aging on coupling of neural activity to the BOLD hemodynamic response. *NeuroImage*, 10, 6-14.
26. **GK Aguirre**, M D'Esposito. (1999). Topographical disorientation: a synthesis and taxonomy. *Brain*, 122, 1613-1628.

27. E Zarahn, **GK Aguirre**, M D'Esposito. (2000). Replication and further studies of neural mechanisms of spatial mnemonic processing in humans. *Cogn Brain Res*, 9, 1-17.
28. M D'Esposito, D Ballard, E Zarahn, **GK Aguirre**. (2000). The Role of Prefrontal Cortex in Sensory Memory and Motor Preparation: An Event-Related fMRI Study. *NeuroImage*, 11, 400-408.
29. DY Kimberg, **GK Aguirre**, M D'Esposito. (2000). Modulation of task-related neural activity in task-switching: an fMRI study. *Cognitive Brain Research*, 10, 189-196.
30. DY Kimberg, **GK Aguirre**, J Lease, M D'Esposito. (2001). Cortical effects of bromocriptine, a D-2 dopamine receptor agonist, in human subjects, revealed by fMRI. *Human Brain Mapping*, 12, 246-257.
31. **GK Aguirre**, JA Detre, E Zarahn, D C Alsop. (2002). Experimental design and the relative sensitivity of BOLD and perfusion fMRI. *NeuroImage*, 15, 488-500.
32. TA Polk, M Stallcup, **GK Aguirre**, DC Alsop, M D'Esposito, JA Detre, MJ Farah. (2002). Neural specialization for letter recognition. *Journal of Cognitive Neuroscience*, 14, 145-159.
33. SM Schaefer, DC Jackson, RJ Davidson, **GK Aguirre**, DY Kimberg, SL Thompson-Schill. (2002). Modulation of amygdala activity by conscious maintenance of negative emotion. *Journal of Cognitive Neuroscience*. 14, 913-921.
34. **GK Aguirre**, JM Ellenbogen, J Pollard, ED Stolzenberg, SL Galetta. (2002). Amyloid angiopathy. *Neurology*, 59, 1656
35. J-J Wang, **GK Aguirre**, DY Kimberg, AC Roc, L Li, MD Schnall, JA Detre. (2003). Arterial Spin Labeling Perfusion fMRI with Very Low Task Frequency. *Magn Reson Med* 49, 796-802.
36. J-J Wang, **GK Aguirre**, DY Kimberg, JA Detre. (2003). Empirical Analyses of Null-Hypothesis Perfusion fMRI Data at 1.5 and 4T. *NeuroImage* 19, 1449-62.
37. AP Jha, SA Fabian, **GK Aguirre** (2004). The role of prefrontal cortex in resolving distractor interference. *Cogn Affect Behav Neurosci* 4, 517-27.
38. J-J Wang, Z Wang, **GK Aguirre**, JA Detre (2005). To smooth or not to smooth? ROC analysis of perfusion fMRI data. *Magn Reson Imaging* 23, 75-81.
39. **GK Aguirre**, JA Detre, J Wang, (2005) Perfusion fMRI for functional neuroimaging, *Int Rev Neurobiol*, 66 213-36.
40. RA Epstein, JS Higgins, W Parker, **GK Aguirre**, S Cooperman (2006) Cortical correlates of face and scene inversion: A comparison. *Neuropsychologia* 44(7): 1145-1158.
41. IR Olson, H Rao, KS Moore, J Wang, JA Detre, **GK Aguirre** (2006) Using perfusion fMRI to measure continuous changes in neural activity with learning. *Brain Cogn* 60, 262-71.

42. M Bedny, **GK Aguirre**, SL Thompson-Schill (2007) Item analysis in functional magnetic resonance imaging. *Neuroimage*. 35, 1093-1102.
43. **GK Aguirre** (2007) Continuous carry-over designs for fMRI. *Neuroimage*. 35, 1480-1494.
44. **GK Aguirre**, AM Komaromy, AV Cideciyan, DH Brainard, TS Aleman, AJ Roman, BB Avants, JC Gee, M Korczykowski, WW Hauswirth, GM Acland, GD Aguirre, SG Jacobson (2007) Visual Cortex Intact and Responsive Despite Early Retinal Blindness from RPE65 Mutation. *PLoS Med*, 4(6), 230.
45. AV Cideciyan, TS Aleman, SG Jacobson, H Khanna, A Sumaroka, **GK Aguirre**, et al. (2007). Centrosomal-ciliary gene *cep290/nphp6* mutations result in blindness with unexpected sparing of photoreceptors and visual brain: Implications for therapy of leber congenital amaurosis. *Hum Mutat*, 28(11), 1074-1083.
46. Z Wang, **GK Aguirre**, H Rao, J Wang, MA Fernandez-Seara, AR Childress, et al. (2007). Empirical optimization of ASL data analysis using an ASL data processing toolbox: Asltbx. *Magn Reson Imaging*.
47. GA Stefanatos, WQ Joe, **GK Aguirre**, JA Detre, G Wetmore (2007). Activation of human auditory cortex during speech perception: Effects of monaural, binaural, and dichotic presentation. *Neuropsychologia*.
48. DJ Libon, L Massimo, P Moore, HB Coslett, A Chatterjee, **GK Aguirre**, A Rice, L Vesely, M Grossman (2007). Screening for Frontotemporal Dementias and Alzheimer's Disease with the Philadelphia Brief Assessment of Cognition: A Preliminary Analysis. *Dement Geriatr Cogn Disord*. 24(6):441-447
49. A Thomas, K Lawler, IR Olson, **GK Aguirre** (2008). The Philadelphia face perception battery. *Archives of Clinical Neuropsychology*. 23(2): 175-187
50. A Harris, **GK Aguirre** (2008). The representation of parts and wholes in face-selective cortex. *Journal of Cognitive Neuroscience*. 20(5): 863-878
51. PD Radoeva, S Prasad, DH Brainard, **GK Aguirre**. (2008) Neural activity within area V1 reflects unconscious visual performance in a case of Blindsight. *Journal of Cognitive Neuroscience*. 20(11), 1-13
52. A Harris, **GK Aguirre** (2008). Effects of Parts, Wholes, and Familiarity on Face-Selective Responses in MEG. *Journal of Vision*. 8(10): 1-12
53. A Chatterjee, A Thomas, S Smith, **GK Aguirre**. (2009) The Neural Response to Facial Beauty. *Neuropsychology*. 23(2): 135-43
54. L Yan, Y Zhyo, Y Ye, J An, **GK Aguirre**, JJ Wang (2009). Physiological Origin of Low Frequency Drift in BOLD FMRI. *Magnetic Resonance in Medicine*. 61(4): 819-27
55. D Drucker, **GK Aguirre** (2009). Different spatial scales of object similarity representation in lateral and ventral LOC. *Cerebral Cortex*. 19(10), 2269-2280.

56. D Drucker, WT Kerr, **GK Aguirre**. (2009) Distinguishing conjoint and independent neural tuning for stimulus features with fMRI adaptation. *J. Neurophysiology*. 101(6): 3310-24 [Selected as an F1000 paper.]
57. EB Wencil, **GK Aguirre**, HB Coslett, A Chatterjee (2010). Carving the clock at its component joints: Neural bases for interval timing. *J Neurophysiology*. 104: 160-168
58. A Harris, **GK Aguirre**. (2010). Neural Tuning for Face Wholes and Parts in Human Fusiform Gyrus Revealed by fMRI Adaptation. *J Neurophysiology*. 104(1):336-45
59. DA Kahn, AM Harris, D Wolk, **GK Aguirre**. (2010) Dissociable temporal components of neural similarity in face perception: An ERP study. *Journal of Vision*, 10(10):12, 1-12
60. LK Morgan, SP MacEvoy, **GK Aguirre**, and RA Epstein. (2011). Distances between real-world locations are represented in the human hippocampus. *Journal of Neuroscience*, 31(4):1238-1245.
61. **GK Aguirre**, MG Mattar, L Magis-Weinberg. (2011) de Bruijn cycles for neural decoding. *NeuroImage*. 56: 1293–1300
62. R Datta, JA Detre, **GK Aguirre**, B Cucchiara. (2011). Absence of grey matter changes in patients with migraine. *Cephalalgia*. 14:1452-8
63. TS Aleman, AV Cideciyan, **GK Aguirre**, WC Huang, CL Mullins, AJ Roman, A Sumaroka, MB Olivares, FF Tsai, SB Schwartz, LH Vandenberghe, MP Limberis, EM Stone, P Bell, JM Wilson, SG Jacobson (2011) Human CRB1-associated retinal degeneration: comparison with the rd8 Crb1-mutant mouse model. *Investigative Ophthalmology and Visual Science*.
64. DA Kahn, **GK Aguirre**. (2012) Confounding of norm-based and adaptation effects in brain responses. *NeuroImage* 60(4): 2294–2299
65. **GK Aguirre** (2012) FIASCO, VoxBo, MEDx: Behind the Code. *NeuroImage* 62(2): 765–767
66. **GK Aguirre** and JA Detre (2012) The development and future of perfusion fMRI for dynamic imaging of human brain activity. *NeuroImage* 62(2): 1279–1285
67. R Datta, J Lee, J Duda, BB Avants, CH Vite, B Tseng, JC Gee, GD Aguirre, **GK Aguirre**. (2012) A digital atlas of the dog brain. *PLoS ONE* 7(12): e52140
68. NC Benson, OH Butt, R Datta, PD Radoeva, DH Brainard, **GK Aguirre** (2012) The retinotopic organization of striate cortex is well predicted by surface topology. *Current Biology* 22(21): 2081–2085
69. R Datta, **GK Aguirre**, S Hu, JA Detre, B Cucchiara (2013) Interictal cortical hyperresponsiveness in migraine is directly related to the presence of aura. *Cephalalgia* 33(6):365-74

70. BC Cucchiara, R Wolf, L Nagae, Q Zhang, S Kasner, R Datta, **GK Aguirre**, J Detre (2013) Migraine with aura is associated with an incomplete circle of Willis: results of a prospective observational study. *PLOS One*
71. OH Butt, NC Benson, R Datta, **GK Aguirre** (2013) The fine-scale functional connectivity of striate cortex in sighted and blind people. *Journal of Neuroscience* 33 (41), 16209-16219
72. NC Benson, OH Butt, DH Brainard, **GK Aguirre** (2014) Correction of distortion in flattened representations of the cortical surface allows prediction of V1-V3 functional organization from anatomy. *PLoS Computational Biology*
73. B Cucchiara, R Datta, **GK Aguirre**, KE Idoko, J Detre (2014) Measurement of visual sensitivity in migraine: Validation of two scales and correlation with visual cortex activation. *Cephalalgia*
74. M Spitschan, S Jain, Dh Brainard, **GK Aguirre** (2014) Opponent melanopsin and S-cone signals in the human pupillary light response. *PNAS*. 11(43) 15568–15572
75. A Persichetti, **GK Aguirre**, S Thompson-Schill (2015) Value is in the eye of the beholder: Early visual cortex codes monetary value of objects during a diverted attention task. *JoCN*
76. AV Cideciyan, **GK Aguirre**, SG Jacobson, O Butt, SB Schwartz, M Swider, AJ Roman, S Sadigh, WW Hauswirth (2015) Pseudo-fovea formation after gene therapy for RPE65-LCA. *IOVS*
77. OH Butt, NC Benson, R Datta, **GK Aguirre** (2015) Hierarchical and homotopic correlations of spontaneous neural activity within the visual cortex of the sighted and blind. *Frontiers in Neuroscience*
78. S Bishop, **GK Aguirre**, AO Nunez-Elizalde, D Toker (2015) Seeing the world through non rose-colored glasses: anxiety and the amygdala response to blended expressions. *Frontiers in Neuroscience*
79. M Spitschan, **GK Aguirre**, DH Brainard (2015) Selective stimulation of penumbral cones reveals perception in the shadow of retinal blood vessels. *PLoS One*
80. AS Persichetti, SL Thompson-Schill, OH Butt, DH Brainard, **GK Aguirre** (2015) fMRI adaptation reveals a non-categorical representation of hue in early visual cortex. *Journal of Vision*
81. G Lupyan, Y Lee, D Roberts-Kedes, M Weber, **GK Aguirre**, S Thompson-Schill (Under review) Similarity of meaning modulates neural similarity within extrastriate cortex
82. R Datta, NC Benson, S Prasad, SG Jacobson, AV Cideciyan, H Bridge, KE Watkins, OH Butt, AB Daina, L Brandes, ED Gennatas, **GK Aguirre**. (Under review) Independent patterns of brain alteration in blindness reflect normal variation in the sighted.

Editorials, Reviews, Chapters, including participation in committee reports (print or other media):

1. **GK Aguirre**, E Zarahn, M D'Esposito. (1998). Neural components of topographical representation. *PNAS USA*, 95, 839-846.
2. **GK Aguirre**, MJ Farah. (1998). Human visual object recognition: what have we learned from neuroimaging? *Psychobiology*, 26, 322-332.
3. M D'Esposito, E Zarahn, **GK Aguirre**. (1999). Event-related functional MRI: Implications for cognitive psychology. *Psychological Bulletin*, 125.
4. **GK Aguirre**. (1999). Face recognition turned upside-down. *Neuron*, 22, 5-6.
5. MJ Farah, **GK Aguirre**. (1999). Imaging visual recognition: PET and fMRI studies of the functional anatomy of human visual recognition. *Trends in Cognitive Sciences*, 3, 179-186.
6. **GK Aguirre**, M D'Esposito. (1999). Experimental Design for Brain fMRI. In C. T. W. Moonen & P. A. Bandettini (Eds.), *Functional MRI* (pp. 369-380). Berlin: Springer Verlag.
7. **GK Aguirre**. (2001). Turning the dial on object perception. *Neuron*, 29, 317-319.
8. **GK Aguirre**. (2002). Topographical Disorientation. In M D'Esposito (Ed.) *Neurological Foundations of Cognitive Neuroscience*. Boston: MIT Press.
9. **GK Aguirre**. (2003). Functional imaging in behavioral neurology and cognitive neuropsychology. In T. E. Feinberg & M. J. Farah (Eds.), *Behavioral Neurology and Cognitive Neuropsychology*. New York: McGraw Hill.
10. **GK Aguirre**. (2004). Experimental Design and Data Analysis for fMRI. In F. Mohamed & S. H. Faro (Eds.), *Clinical applications of fMRI*. Springer-Verlag. In Press
11. **GK Aguirre**, JA Detre, J Wang. (2005). Perfusion fMRI for functional neuroimaging. *Int Rev Neurobiol*, 66, 213-36.
12. **GK Aguirre**. (2006). Interpretation of clinical functional neuroimaging studies. In: D'Esposito, M. (Ed.), *Clinical Functional MRI*. Parthenon Publishing, New York.
13. A Harris, **GK Aguirre**. (2007). Prosopagnosia. *Current Biology*.
14. A Harris, **GK Aguirre**. (2007). Toward a Neurofunctional Definition of "Face-Blindness". *Scientific American Mind Matters*. (<http://science-community.sciam.com/blog-entry/Mind-Matters/Face-Like/300004881>) Ed: David Dobbs.
15. **GK Aguirre**. (2008). The Political Brain. *Cerebrum*. September 12. (<http://www.dana.org/news/cerebrum/detail.aspx?id=13242>)
16. AK Asbury, MR Sperling, **GK Aguirre**, GT Liu. (2011). Selected contributions to Neurology by Philadelphia neurologists since 1980 (prepared in association with the 125th anniversary celebration meeting of the Philadelphia Neurological Society on Feb. 20, 2008). *Reviews In Neurological Diseases*. 7: 140-149.

17. **GK Aguirre**. (2011). Experimental Design and Data Analysis for fMRI. In F. Mohamed & S. H. Faro (Eds.), *Clinical applications of fMRI*. Springer-Verlag.
18. **GK Aguirre** (2012) FIASCO, VoxBo, MEDx: Behind the Code. *NeuroImage*
19. **GK Aguirre** (2014) Functional Neuroimaging: Technical, Logical, and Social Perspectives. *Hastings Center Report* 44, no. 2 suppl. (2014): S8-S18.