

## CURRICULUM VITAE

**Katalin M. Gothard, M.D., Ph.D.**

### *Education*

- 1988 **M.D.** Timisoara School of Medicine (Romania)  
1996 **Ph.D.** University of Arizona, Neuroscience Program  
Dissertation: Multiple Maps and Multiple Reference Frames in the Hippocampal  
Representation of Space  
Dissertation Director: Bruce L. McNaughton, Ph.D.

### *Present Position*

**Associate Professor**

Department of Physiology, College of Medicine, University of Arizona

### *Adjunct Appointments*

Department of Neuroscience, College of Science, The University of Arizona  
The Evelyn F. McKnight Brain Institute, The University of Arizona  
Department of Neurology, College of Medicine, The University of Arizona

### *Employment History*

- 1988- 1990            **Neurosurgical Postgraduate Trainee/Resident**  
University of Cluj-Napoca (Romania)  
Department of Neurosurgery
- 1/1990- 6/1990       **International Fellow**  
Hungarian Academy of Science  
Institute of Experimental Biology
- 6/1990-1996         **Graduate Research Assistant**  
University of Arizona, Neuroscience Program
- 1996-1999           **Postdoctoral trainee**  
Joint appointment in University of Arizona, ARL- Neural Systems,  
Memory & Aging and the Center for Neuroscience, University of  
California Davis
- 1999-2000           **Postgraduate Researcher**  
Center for Neuroscience, University of California Davis
- 2000-2002           **Assistant Adjunct Professor**  
Dept of Psychiatry, University of California Davis
- 2002-2009           **Assistant Professor**  
Dept of Physiology, University of Arizona, College of Medicine

## ***Honors and Awards***

- "Bursa de Studii" (financial award for high achieving medical students) 1982-1988
- International Training Fellowship, Hungarian Academy of Sciences 1/90-6/90  
Institute of Biophysics, Szeged, Hungary
- University of Arizona Graduate Student Scholarship 1993-1994
- Mortar Board Senior Honorary Recognition for 2005  
Outstanding Dedication to Students and Faculty of the U of A
- Invited Member of RDoC, an NIMH initiative 2012
- Dean's List for Excellence in Medical Education 2013

## ***Ongoing Grants and Contracts***

R21 MH097168 7/1/2011 – 6/31/2013  
Title: The role of the primate amygdala in gaze following and facial mimicry.  
The goal of this project is to inactivate or hyper activate certain nuclei in the amygdala thereby disrupting or enhancing facial mimicry and gaze following.  
Role: PI

Arizona Center for the Biology of Complex Diseases 1/10/2013 – 1/9/2014  
Title: The PKMzeta enigma: an exclusive molecular correlate of memory trace?  
The role of this project is to determine the role of PKMzeta in the long-term maintenance of emotional memories.  
Role: Co-PI

1P50MH100023 (PI:Young) 07/01/13-6/31/18  
NIH/NIMH  
Title: Silvio O. Conte Center for Oxytocin and Social Cognition  
Project #2  
The goal of this grant is to establish a group of projects all examining the effects of oxytocin on various aspects of social cognition in rodents, nonhuman primates and humans.  
Role: Co-PI

## ***Completed Grants***

NIH/NIMH – R21 MH 086065  
Role: PI  
Effort: 20%  
Total Direct Cost: \$275,000  
Dates: 6/1/2010 – 5/31/2012  
Title: *The primate amygdala and the control of visual search of emotional stimuli.*

NIH/NIMH - R01 MH070836

Role: PI

Effort: 75%

Total Direct Cost: \$908,280

Dates: 12/1/2004 – 11/31/2009

Title: *Neural Encoding of Emotion in the primate amygdala*

NIH/NIMH - K01 08634

Role: P.I

Effort: 75%

Dates: 5/1/2000 – 4/31/2005

Title: *Neural Encoding of Emotion in the primate amygdala*

Steven M. Gootter Investigator Award

Sponsored by the Sarver Heart Center, College of Medicine, The University of Arizona

Role: Co-PI

Effort: 15%

Total costs: \$25,000

Dates: 2006-2007

Title: *Left Amygdala Activation: A Neurophysiologic Trigger of Myocardial Electrical Instability in the Context of Emotional Stress and Coronary Artery Disease.*

NIH/NIMH – R03 NH082282

Role: Co-PI (PI – Dr. Lisa Parr, Emory University)

Effort: 5%

Total Direct Cost: \$93,387

Dates: 1/9/2008 – 1/8/2010

Title: *MaqFACS- Measuring Expressive Movement in Monkeys*

NIH/NINDS – R21 NS061146-01

Role: Co-PI (PI = Dr. Andrew Fuglevand, The University of Arizona)

Effort: 5%

Total Direct Cost: \$275,000

Dates: 1/01/2008 – 12/31/2019

Title: *Probabilistic Control of Functional Electrical Stimulation*

### ***Teaching Experience***

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|-----------|--|
| 1988-1989 | University of Cluj-Napoca (Romania)<br>Weekly presentation of case studies for medical students      |
| 1992      | University of Arizona, College of Medicine)<br>Human Neuroscience course (Lectures for 100 students) |
| 2000      | University of California Davis, School of Pharmacy   |

- Neuropharmacology course (Lectures on affective disorders)
- 2000-2002 University of California Davis, School of Medicine  
Human Neuroscience course (Lectures on the limbic system and the cortex)
- 2002-2006 University of Arizona, PSIO 430 Psyconeuroimmunology (6 lectures/year)
- 2003-2006 University of Arizona, PSIO 620 Systems Neurophysiology (6 lectures/year)
- 2003-2005 University of Arizona, College of Medicine  
Human Neuroscience course (Practical demonstration of human brain anatomy)
- 2005-2007 University of Arizona, College of Medicine Human Neuroscience – Lectures and  
Group Coordinator for Case-Based Medical Instruction
- 2008-2009 Course coordinator of a graduate seminar course : The Amygdala
- 2007-present Core faculty for the Neuroscience block for the College of Medicine
- 2007-present Case-Based Medical Instruction: Fundamentals of Neurological and Psychiatric  
diseases
- 2007-2012 System Neurophysiology section of a graduate-level physiology course
- 2011-2012 Systems Physiology: The neural control of respiratory and cardiovascular  
functions.
- 2012 -present System Neuroscience graduate course (560) – section on limbic system
- 2012-present Undergraduate Neuroscience course (315) – section on the autonomic system.
- 2012-present Annual Neuroscience lectures for residents in neurology and neurosurgery

## ***Service and Outreach***

### **Local/State Outreach**

- 2004 Grass Foundation Travel Award on behalf of the Tucson chapter of the Society for  
Neuroscience. The award funded the visit and seminar of Dr. Roberto Malinow.
- 2004 Brain Awareness Week, Tucson chapter of the Society for Neuroscience.
- 2005 Brain Awareness Week, public lecture – The neural basis of emotion and social  
communication
- 2007 Offered an 8-week summer research internships to high school students from  
underserved areas of Arizona.
- 2008 Laboratory participated in the “Brain Awareness Week”
- 2009 Spirit of Senses – presentation to the literary salon

2009 Arizona Teacher Training in Science  
 2009 NIH Disadvantaged High School Student Research Program  
 2009 - 2013- Faculty supervisor of the undergraduate Neuroscience Club.  
 2013 –Neuroscience booth at the University of Arizona Book Fair

***Departmental Committees***

Dept. of Physiology, Liaison Committee - Member	2005
Physiology Science Picnic - Organizer	2009
Promotion and Tenure Committee	2010
Self-study committee for Academic Program Review	2013

***College of Medicine Committees***

MD-Ph.D. Program Committee	- Member	2007-2010
Arizona Health Science Center		
AHSC Advisory board on Neuroscience	- Member	2013-present

***University Committees***

University Animal Care	- Member – Primate Task Force	2004-2005
Physiological Sciences IDP	- Member – Executive Committee	2004-2005
Physiological Sciences IDP	- Member – Recruiting Committee	2004-2006
Neuroscience IDP	- Chair – Seminar Committee	2004-2005
Neuroscience IDP	- Chair – Seminar Committee	2008-2009
Neuroscience IDP	- Chair – Recruiting Committee	2008-2009
Neuroscience IDP	- Member – Recruiting Committee	2004-2009
Neuroscience IDP	- Member – Seminar Committee	2004-present
Neuroscience IDP	- Member – Executive Committee	2009-present
Neuroscience IDP	- chair – Seminar Committee	2010-present
Physiological Sciences IDP	- Chair – Program Committee	2011-present
Neuroscience IDP	- chair – Admissions Committee	2011-present
Undergraduate Biology Research Program	- Admissions Cmtee.	2012-present

***Other Committees - Dissertation committees***

Katie Ketchum	Neuroscience Doctoral student	2004-2005
David Lent	Neuroscience Doctoral student	2003-2006
Eynav Elgavish	Psychology Doctoral student	2005-2006
Kelly Brooks	Physiological Sciences, Master’s students	2004-2006
Steven Cowen	Neuroscience Doctoral student	2004-2007
Maria Luisa Ruiz-Luna	Neuroscience Doctoral student	2004-2006
Christopher Theal	Neuroscience Doctoral student	2004-2007
Marco Herrera Valdez	Physiological Sciences Doctoral student	2003-2007
Craig Santerre	Psychology Doctoral student	2004-2007
Kevin Spitler	Neuroscience Doctoral student	2003-2007
Jennifer Greenleaf	Neuroscience Doctoral student	2004-2007
Candice North	Physiological Sciences, Master’s students	2006-2007
James Canavah	Psychology Doctoral student	2005-2008
Andre J. Riveros	Insect Science Doctoral student	2007-2008

Gary Sutherland	Physiological Sciences Doctoral student	2003-2009
Drew Maurer	Neuroscience Doctoral student	2005-2009
Thabelo Khobeko	Neuroscience Doctoral student	2007-2010
Lise Johnson	Biomedical Engineering	2008-2010
Nathan Insel	Neuroscience Doctoral student	2004-2010
Joshua Martin	Neuroscience Doctoral student	2006-2011
Siobhan Horscheit	Psychology	2008-2011
Megan Alexander	Biomedical Engineering	2010-present
James A. Solysts	Emory Neuroscience Doctoral Student	2012- present
Andrew Busch	Physiological Sciences Doctoral Student	2011-2012
Alex Thome	Neuroscience Doctoral student	2005-2012
Adam Lester	Neuroscience Doctoral Student	2012-2013

**Advising/ supervising the research of postdoctoral trainees**

Haiyin Chen		2007- 2008
Michael X. Cohen		2009-2010
Kristof Laszlo		2012-2013

**Advising/ supervising the research of graduate students**

Kelly N. Brooks	Physiological Sciences, MS	2004-2006
Kevin M. Spitler	Neuroscience Program, PhD	2003-2007
Candice North	Physiological Sciences, MS	2006-2007
Christopher Laine	Physiological Sciences, PhD	2006-2009
Clayton Mosher	Neuroscience Program Ph.D	2009-present
Adam Lester	Neuroscience Program Ph.D	2010-2013
Ryan Smith	Neuroscience Program Ph.D	2010-2011
Alie Buckmaier	Physiological Sciences, MS	2010-presnt
Derek Clarke	Physiological Sciences, MS	2010-2010
Lauritz Dickman	Cognitive Science, PhD	2012-presnet
Philip T. Putnam	Neuroscience Program, Ph.D	2013-present
Jean-Paul Wiegant	Neuroscience program, Ph.D	2013 - present

**Advising/ supervising the research of undergraduate students**

Whitney Sheen	Summer internship	2004
Erin Klingler	Research internship	2006
Lori Moscaliuc	Research internship	2006
Meggan Dickerson	Research internship	2006
Natale Brill	Summer internship	2005
Ipec Kulachi	Research internship	2007
Travis Wilder	Research Assistant	2005
Alisa Ryan	Honors student	2008
Clayton Mosher	UBRP student	2005-2009
Jeremy Oulton	Research internship	2007- 2010
Clark Alves	Research internship	2007-2008
Robert Gibboni	UBRP student	2007-2009
Danielle McCandless	Research internship	2007-2008

Sara Peers	Independent study	2008-2009
Michelle Magaña Mendoza	Independent study	2008-2010
Johnny Saldate	Independent study	2010
Kayven Farshad	UBRP student	2009 2010
Mathew Stib	Research assistant	2010-2010
Susma Ghimire	Research assistant	2010-2012
Miranda Andersen	Research assistant	2011-2013
Daniel Hill	Research assistant	2011-2013
Danielle Lockwood	Research assistant	2011 – 2012
Marisa Gerace	Research assistant	2011 – 2012
Gabrielle Lacy	Research assistant	2011 – present
Christine Tang	Research Assistant	2013 – present
Thomas Nhan	Research Assistant	2013 – present
Adittee Kudrimoti	volunteer	2013 – present

### **National and International Outreach**

2005	Session Chair- Navigation and Migration Gordon Research Conference of Neuroethology, Oxford University
2007	Ad-hoc grant reviewer for CNRS
2007 - 2010	Executive Committee Member and Secretary – Intl. Soc. for Neuroethology
2009 -	Ad-hoc member of NIH study section (IFCN)
2010	Ad-hoc member of NIH study section (IFCN)
2010	NSF – Ad-hoc reviewer
2010	Reviewer for the Human Frontiers Science Project
2010	OppNet participant - NIMH
2011	Editorial Board of Frontiers in Comparative Psychology
2012	Research Domain Criteria for Psychiatric Disorders – NIMH initiative
2012	Grant Reviewer for Belgian Earth and Biosciences Institute (Alwoprogramma)
2013	Ad-hoc member of study section Delopmental Brain Disorders

### **Guest Referee for**

*Neuron*  
*Science*  
*Journal of Neuroscience*  
*Psychological Reviews*  
*Journal of Neurophysiology*  
*Learning and Memory*  
*Hippocampus*  
*Experimental Brain Research*  
*Psychiatry Research*  
*Journal of Neuroscience Methods*  
*Neuroimage*  
*Current Biology*  
*Cerebral Cortex*

***Membership in professional organizations***

Worldwide Hungarian Medical Academy	1994-1996
Society for Neuroscience	1991-present
International Society for Neuroethology	1997-present
American Heart Association	2012-present
Society for Social Neuroscience	2012-present

***Scholarly Presentations***

Presentations and Seminars at the University of Arizona

- University of Arizona, Brain Behavior Computation Seminar Series 2001  
“What can we learn about monkey social behavior and emotions from scanning eye movements?”
- Neurology Grand Rounds, University of Arizona, College of Medicine 2003  
“Face Processing in the Primate Amygdala”
- Neurology Grand Rounds, University of Arizona, College of Medicine 2004  
“The Physiology of Emotion”
- Motor Control Group, University of Arizona 2004  
“Neural and Autonomic Correlates of Emotion”
- Neurobiology Discussion Group – ARL Division of Neurobiology 2005  
“The role of the amygdala in processing facial emotion”
- Cognitive Neuroscience Brown Bag series, University of Arizona 2005  
“An Amygdalocentric view of emotion”
- Neurology Grand Rounds, University of Arizona, College of Medicine 2005  
“A Primate Model of Emotion”
- Department of Neurology – Grand Rounds 2006  
“Brain mechanism of Emotion”
- Frontiers in Medical Research Seminar (Drs. Lane and Gothard) 2007  
“Neural Basis for Emotion and Disease”
- Department of Neurology – Grand Rounds 2007  
“The amygdala at face value; neurophysiological studies of the monkey amygdala”
- ARL – Neurobiology Faculty Chalk Talks 2007  
“The division of labor among the nuclei of the monkey amygdala”
- Department of Psychology- Psychophysiology Group 2007  
“Neuroimaging in the monkey amygdala”
- University Animal Care Seminar series 2009  
“Social and Emotional Communication in rhesus macaques”
- Department of Neurosurgery, University Medical Center 2012  
“The primate amygdala”



- Cognitive Neuroscience Colloquium, Department of Psychology 2013  
“The role of the amygdala in the production of facial expressions”

#### Invited National Lectures

- Emory University – Yerkes Primate Research Center - Atlanta 2003  
“Visual Strategies used by Rhesus monkeys to differentiate between facial expressions”
- Arizona State University, Phoenix, Department of Psychology and Bioengineering 2003  
“The role of the Primate Amygdala in Social Communication”
- Oregon Regional Primate Research Center - Portland 2002  
“The role of the primate amygdala in processing facial emotion”
- University of California Davis, Psychiatry Grand Rounds 2001  
“Visual Exploration of Faces and Facial Expressions; Physiology and Psychopathology”
- Georgetown University- Interdisciplinary Program in Neuroscience 2007  
“Emotions at face value: neurophysiological and imaging studies of the monkey amygdala”
- Johns Hopkins University- The Zanvyl Krieger Mind/Brain Institute 2008  
Bodian Seminar “The role of the monkey amygdala in emotion and attention”
- Emory University –Symposium of Social Neuroscience 2009  
“Face processing in the monkey amygdala: neural and autonomic correlates”
- University of Texas San Antonio 2009  
“Face processing in the monkey amygdala: neural and autonomic correlates”
- The National Institute of Mental Health – Laboratory of Neuropsychology 2010  
“Attention and Emotion in the Primate Amygdala”
- California Institute of Technology 2010  
“Attention and Emotion in the Primate Amygdala: Neural and Autonomic Correlates”
- Rutgers University – Center for Molecular and Behavioral Neuroscience 2010  
“Primate Emotions in the Amygdala”
- Emory University – Yerkes Primate Center 2011  
“The Role of the Primate Amygdala in Social Cognition”
- Barrow Neurological Institute – Phoenix, Arizona 2012  
“Neural and autonomic correlates of social behavior in primates”
- Computational Neuroscience – Computational Neuroethology Workshop 2012  
“Decoding Social Signals from Neural Activity in the Monkey Amygdala”

#### Presentations at International Meetings

- Annual Meeting of the Society for Neuroscience, San Diego 2001
- Annual Meeting of the Society for Neuroscience, Orlando 2002
- Gordon Research Conference – Neural Processing of Naturalistic Stimuli 2004
- Annual Meeting of the Society for Neuroscience, San Diego 2004
- Annual Meeting of Japanese Physiological Society, Maebashi City 2006  
“Neural Responses to Facial Expressions in the Monkey Amygdala”
- Annual Meeting of the Society for Neuroscience, Atlanta 2006

- Annual Meeting of the Society for Neuroscience, Washington DC 2008
- Gordon Research Conference – The amygdala – Colby College 2009
- 9-th International Congress of Neuroethology – Salamanca, Spain 2010
- Annual Meeting of the Society for Neuroscience- San Diego 2010
- Annual Meeting of the Society for Social Neuroscience 2012
- Annual Meeting of the Society for Neuroscience – New Orleans 2012
- Gordon Research Conference – The Amygdala in Health and Disease 2013

#### Invited International Lectures:

- 37<sup>th</sup> Annual General Meeting of the European Brain and Behavior Society 2005  
Trinity College, Dublin, Ireland  
“Convergence of Differentially Processed Signals in the Primate Amygdala”
- Max Planck Institute, Tübingen, Germany 2005  
“Neural Responses to Faces in the Monkey Amygdala”
- McMaster University, Ontario, Canada. 2006  
“The Role of the Amygdala in Emotions”
- Toyama Medical School – Japan 2006  
“The Neural Basis of Social Behavior in Macaques”
- Eighth International Congress of Neuroethology, Vancouver, Canada 2007  
“Arousal and emotion: dual amygdaloid processes elicited by social stimuli”
- The 15 Annual Conference on Neurobehavioral Rehabilitation in Acquired 2008  
Brain Injury, McMaster University, Canada  
“The role of the primate amygdala in emotion and social behavior”
- The University of Lethbridge- Department of Neuroscience 2009  
Canadian Centre for Behavioural Neuroscience  
“Emotion and Attention in the Primate Amygdala”
- Psychiatry Unit of Penticton Regional Hospital, British Columbia, Canada 2011  
“The Neuroscience of Autism”
- 2012 meeting of the International Society for Social Neuroscience - 2012  
“Somatosensory and motor control of facial expressions”
- Medical University of Pecs – Hungary 2013  
“The Role of the Amygdala in the Receiving-Emitting Cycle of Facial Expressions”

### ***Publications***

#### ***Publications/Creative Activity (Published and Accepted)***

#### ***Chapters in scholarly books and monographs***

Parr, L.A., and **Gothard, K.M.** Studying Emotion in Animals: Methods, Materials, and Training 2007. The Handbook of Emotion Elicitation and Assessment, Coan, J.A and Allen J.J.B (eds). Oxford University Press. pp: 379-397

**Gothard, K.M.**, Hoffman, K.L. Emotional Circuits of the Primate Brain. 2009 Primate Neuroethology Asif Ghazanfar (ed). Oxford University Press. 292-315

## *Refereed Journal Articles*

1. Zolog, A., Marcovici, H. and **Gothard, K.M.** (1988). Alexie in citirea pictografica\*. *Timisoara Medicala* 22: 26-39 (\*Alexia in iconographic reading)
2. Skaggs, W.E., McNaughton, B.L., **Gothard, K.M.**, and Markus, E.J. (1993). An information theoretic approach to deciphering the hippocampal code. In Hansen, S.J., Cowan, J.D., and Giles, C.L., editors, *Advances in Neural Processing Systems*, volume 5, pp 1030 -1037; Morgan Kaufmann; San Mateo, California.
3. **Gothard, K. M.**, Skaggs, W.E., Moore, M.K., and McNaughton, B.L. (1996) Binding of hippocampal CA1 neural activity to multiple reference frames in a landmark-based navigation task. *Journal of Neuroscience*, 16:823-835.
4. McNaughton, B.L., Barnes, C.A., Gerrard, J.L., **Gothard, K.M.**, Jung, M.W., Knierim, J.J., Kudrimoti, H., Qin, Y., Skaggs, W.E., Suster, M., Weaver, K.L. (1996) Deciphering the hippocampal polyglot: the hippocampus as a path integration system. *Journal of Experimental Biology* 199:173-185
5. **Gothard, K.M.**, Skaggs, W.E., and McNaughton, B.L. (1996) Dynamics of mismatch correction in the hippocampal ensemble code for space: interaction between path integration and environmental cues. *Journal of Neuroscience* 16: 8027-8040
6. **Gothard, K.M.**, Hoffman, K.L, Battaglia, F.P., and Bruce L. McNaughton. (2000) Dentate gyrus and CA1 ensemble activity during spatial reference frame shifts in the presence and absence of visual input. *Journal of Neuroscience* 15:7284-729
7. **Gothard, K.M.**, Erickson, C. A., Amaral, D.G. (2004) How do monkeys look at faces in a visual paired comparison task? *Animal Cognition* 7: 25-36
8. Terrazas, A., Krause. M., **Gothard, K.M.**, McNaughton, B.L., Barnes, C.A. (2005) Self-motion and the hippocampal spatial metric. *Journal of Neuroscience* 25:8085-96.
9. Waller, B.M., Vick, S-J., Parr, L.A., Bard, K.A., Smith Pasqualini, M.C., **Gothard, K.M.**, Fuglevand, A.J. (2006) Intramuscular Electrical Stimulation of Facial Muscles in Humans and Chimpanzees: Duchenne Revisited and Extended. *Emotion*. 6:367-382.
10. **Gothard, K.M.**, Battaglia, F.P., Erickson, C.A., Spitler, K.M., and Amaral, D.G. (2007) Neural Responses to Facial Expression and Face Identity in the Monkey Amygdala *J. Neurophysiology* 97: 1671 – 1683
11. Hoffman, K.K. **Gothard, K.M.**, Schmid, M.C., Logothetis, N.K. (2007) Facial expression- and gaze-selective responses in the monkey amygdala. *Current Biology* 17:766-772
12. Spitler, K.M., **Gothard. K.M.** (2008) A removable silicone elastomer seal reduces granulation tissue growth and maintains the sterility of recording chambers for primate neurophysiology, *Journal of Neuroscience Methods*, 30;169(1):23-6.
13. Waller, B.M., Parr, L.A., Burrows, A., **Gothard, K.M.**, Fuglevand, A.J. (2008) Intramuscular electrical stimulation of facial muscles in Rhesus monkeys. *Physiology and Behavior*, 95(1-2):93-100 Epub Ahead of Print July 2008, PMID 18582909
14. **Gothard, K.M.**, Brooks, K.N., Peterson, M.A. (2008) Multiple perceptual mechanisms of face recognition in macaque monkeys. *Animal Cognition* 12(1):155-67. Epub 2008 Sep 12. PMID: 18787848
15. Laine C. M, Spitler, K.S., Mosher, C.M., **Gothard, K.M.** (2009) Behavioral triggers of skin conductance responses and their neural correlates in the primate amygdala. *J. of Neurophysiology* 101:1749-754. PMID: 19144740

16. Gibboni R.R., Zimmerman, P.E., **Gothard, K.M.** (2009). Individual differences in scanpaths correspond with serotonin transporter genotype and behavioral phenotype in Rhesus monkeys (*Macaca mulatta*). *Frontiers in Behavioral Neuroscience*. 3:50. doi: 10.3389/neuro.08.050.2009
17. Parr, L.A., Waller, B.M., Burrows, A.M., **Gothard, K.M.** & Vick, S.J. (2010) MaqFACS: A Muscle-Based Facial Movement Coding System for the Macaque Monkey. *American Journal of Physical Anthropology* 143:625-630
18. Mosher, C.M., Zimmerman, P.E., **Gothard, K.M.** (2010) Response characteristic of the basolateral and centromedial neurons in the primate amygdala. *J. Neuroscience* 30:16197–16207
19. Mosher, C.M., Zimmerman, P.E., Gothard, K.M. (2011) Videos of conspecifics elicit interactive looking patterns and facial expressions in monkeys. *Behavioral Neuroscience*, 25: 639-652 PMID: 21688888
20. Leonard, T.K., Blumentahl, G., **Gothard, K.M.**, Hoffman, K.L. (2012) How Macaques View Familiarity and Gaze in Conspecific Faces. *Vision. Behav Neurosci.* 126(6):781-91.
21. Hadj-Bouzian, F., Liu, N., Bell A.H., **Gothard, K.M.**, Luh, W., Tootell, R.B., Murray, E.A., Ungerleider, L.G. (2012) Amygdala lesions disrupt modulation of fMRI activity evoked by facial expression in the monkey inferior temporal cortex. *Cerebral Cortex. PNAS* 109(52): E3640–E3648.
22. Parker, S.A., Mandell, E. K., Hapnak, S. M., Maskaykina, I.Y., Kusne, Y., Kim, J., Moy, J.K., St. John, P.A., Wilson, J.M., **Gothard, K.M.**, Price, T.J., Gosh, S. (2013). Competing molecular interactions of aPKC isoforms regulate neuronal polarity. *PNAS*. In press

### ***Manuscripts Accepted for Publication or Under Review***

1. Mosher, C.M., Zimmerman, P.E., **Gothard, K.M.** (2013) "Neurons in the monkey amygdala detect eye-contact during naturalistic social interactions". Accepted pending revision *Current Biology*
2. **Gothard, K.M.** (2013). The motor control of facial expressions. Accepted pending revisions *Frontiers in Decision Neuroscience*.
3. Burke, S.N., Thome, A., Plange, K., Engle, J.R., Trouard, T.P., **Gothard, K.M.**, Barnes, C.A. (2013) Orbitofrontal Cortex and Basolateral Amygdala Volume Show a Dissociable Relationship with Reward Devaluation in Young and Aged Monkeys. Accepted pending revisions *J. Neuroscience*

### ***Published Abstracts and Short Communications***

1. M.A., Enoka, R.M., Reinking, R.M., Gothard, K.M., and Stuart, D.G. 1991. Effects of six weeks of immobilization on motor-unit properties in cat tibialis posterior. *Soc. Neurosci. Abstr.* 17: 648
2. Gothard, K. M., Skaggs, W.E., McNaughton, B.L., Barnes, C.A., and Youngs, S.P. 1992. Place field specificity depends on the proximity of visual cues. *Soc. Neurosci. Abstr.* 18:1216

3. Qin, Y., Markus, E.J., McNaughton, B.L., Barnes, C.A., and Gothard, K. M. 1993. Place field directionality: Relation to visual, behavioral and spatial variables. Soc. Neurosci. Abstr. 20; 1207
4. Abstr. 20; 1207
5. Gothard, K.M., Skaggs, W.E., Moore, M.K., and McNaughton, B.L. 1994. Behavioral correlates of hippocampal CA1 cells in a spatial navigation task. Soc. Neurosci. Abstr. 493:10
6. Gothard, K.M., Skaggs, W.E., and McNaughton, B.L. 1995. Interaction between multiple spatial reference frames in the rat hippocampus. Soc. Neurosci. Abstr. 21:941
7. McNaughton, B.L., Gothard, K.M., and Skaggs, W.E. 1995. Context-dependent binding of hippocampal "place cells" to different feature-centered reference frames. Soc. Neurosci. Abstr. 21; 941
8. Chialvo, D.R., Barnes, C.A., McNaughton, B.L., Gothard, K.M., and Mehta, M. 1995. Cooperative role of periodic driving and random background input in governing theta output in the rat hippocampus. Soc. Neurosci. Abstr. 21:942
9. Treves, A., Panzeri, S., Rolls, E.T., Gothard, K.M., and Skaggs, W.E. 1995. What thinking of neurons as binary units misses out. Soc. Neurosci. Abstr. 21:1225
10. Gothard, K.M., Skaggs, W.E., and McNaughton, B.L. 1996. Dynamics of mismatch correction in the hippocampal ensemble code for space. Soc. Neurosci. Abstr. 22:1872
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