

**Mimi Le Phan, Ph.D.**  
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## Education

- Ph.D. in Neuroscience, University of California, Davis (Davis, CA), December 2001  
Dissertation: *Factors Underlying the Perception of Sound Locations and Temporal Discrimination of Rapidly Presented Acoustic Stimuli in the Primate Auditory Cortex*  
Committee: Gregg Recanzone, Ph.D. (advisor), Mitch Sutter, Ph.D., Leah Krubitzer, Ph.D.
- B.A. in Biology, Rutgers College (New Brunswick, NJ), June 1992
- B.A. High Honors in Psychology, Rutgers College (New Brunswick, NJ), June 1992

## Primary Appointments

- Psychology Department, Rutgers, The State University of New Jersey (New Brunswick, NJ)

Associate Research Professor	2018-
Assistant Research Professor	2010-2018
Research Associate	2006-2010
Postdoctoral Associate	2002-2006

## Fields

Systems and behavioral neuroscience with an emphasis on auditory plasticity/stability and perceptual functions in humans, non-human primates, rodents, and songbirds across the lifespan and pathologies. Epigenetic regulation of and developmental influences on sensory and sensorimotor learning and memory. Modelling of infant vocal learning.

## Funding

- Grant Number: R15 HD085102  
Principal Investigator: Pytte, Carolyn L. / **Phan, Mimi L.** / Ramage-Healey, Luke  
Project Title: Effects of Statins on Juvenile Learning, Memory and Neuroestrogen  
Project Period: 08/06/2015 - 07/31/2019
- Grant Number: R03 HD068960  
Principal Investigator: **Phan, Mimi L.** / Pytte, Carolyn L.  
Project Title: Effects of Statins on the Neurobiology of Learning and Memory Across the Lifespan  
Project Period: 3/4/2011 - 2/28/2014
- Grant Number: The Busch Biomedical Grant Program (Rutgers University)  
Principal Investigator: **Phan, Mimi L.**  
Project Title: Effects of Statins on Neural Processes of Learning and Memory Across the Lifespan  
Project Period: 7/1/2010 - 5/1/2012
- Grant Number: R03 DC007971  
Principal Investigator: **Phan, Mimi L.**  
Project Title: Mechanisms Underlying the Development of Auditory Perception in Songbirds  
Project Period: 12/06/2005 - 11/30/2009
- Grant Number: R03 DC007971-03S1 (*ARRA Administrative Supplement*)  
Principal Investigator: **Phan, Mimi L.**  
Project Title: Mechanisms Underlying the Development of Auditory Perception in Songbirds  
Project Period: 06/01/2009 - 10/31/2009

- Grant Number: DC 008854-02S1 (*ARRA Administrative Supplement*)  
Principal Investigator: Vicario, David S.  
Project Title: Auditory Processing & Memory for Complex Signals  
Project Period: 8/14/2009 - 6/30/2012

## Publications

1. Bell BA, **Phan ML**, Meillere A, Evans J, Leitner S, Vicario D, Buchanan K. (2018). Influence of early-life nutritional stress on songbird memory formation. *Proceedings of the Royal Society B: Biological Sciences*. 285 20181270; DOI: 10.1098/rspb.2018.1270. Published 26 September 2018.
2. **Phan ML\***, Gergues MM\*, Mahidadia S, Jimenez-Castillo J, Vicario DS, Bieszczad KM. (2017). HDAC3 Inhibitor RGFP966 Modulates Neuronal Memory for Vocal Communication Signals in a Songbird Model. *Front Syst Neurosci*. 5;11:65. doi: 10.3389/fnsys.2017.00065. PMID: 28928640 (\* co-first authors)
3. Tsoi SC, Barrientos AC, Pytte CL, Vicario DS, **Phan ML**. (2017). The effects of long-term atorvastatin use on the cytoarchitecture of new and older neurons of sensorimotor nucleus HVC in a juvenile songbird model. <https://www.biorxiv.org/content/early/2017/10/02/196204>
4. **Phan ML** and Bieszczad KM. (2016). Sensory cortical plasticity participates in the epigenetic regulation of robust memory formation. *Neural Plasticity: Neural Plasticity*, vol. 2016, Article ID 7254297, 2016. doi:10.1155/2016/7254297.
5. Bell BA, **Phan ML**, and Vicario DS. (2015). Neural Responses in Songbird Forebrain Reflect Learning Rates, Acquired Salience and Stimulus Novelty after Auditory Discrimination Training. *J Neurophysiol*. Mar 1;113(5):1480-92. doi: 10.1152/jn.00611.2014. PMID: 25475353.
6. Yoder KM, **Phan ML**, Lu K, Vicario DS. (2015). He hears, she hears: Are there sex differences in auditory processing? *Dev Neurobiol*. 75(3):302-14. doi: 10.1002/dneu.22231.
7. Tsoi SC, Aiya UV, Wasner KD, **Phan ML**, Pytte CL, Vicario DS. (2014). Hemispheric Asymmetry in New Neurons in Adulthood Is Associated with Vocal Learning and Auditory Memory. *PLoS One*. doi: 10.1371/journal.pone.0108929. PMID:25251077.
8. **Phan ML** and Vicario DS. (2010). Hemispheric differences in processing of vocalizations depend on early experience. *Proc. Natl. Acad. Sci. USA* 107:2301-6.
9. Pinaud R, Terleph TA, Tremere LA, **Phan ML**, Dagostin AA, Leão RM, Mello CV, and Vicario DS. (2008). Inhibitory network interactions shape the auditory processing of natural communication signals in the songbird auditory forebrain. *Journal of Neurophysiology* 100:441-55.
10. **Phan ML** and Recanzone GH. (2007). Single neuron responses to rapidly presented temporal sequences in the primary auditory cortex of the awake macaque monkey. *Journal of Neurophysiology* 97:1726-37.
11. **Phan ML**, Pytte CL, and Vicario DS. (2006). Early auditory experience generates long-lasting memories that may subserve vocal learning in songbirds. *Proc. Natl. Acad. Sci. USA* 103:1088-93.
12. **Phan ML\***, Schendel KL\*, Recanzone GH, and Robertson LC. (2000). Auditory and visual spatial localization deficits following bilateral parietal lobe lesions in a patient with Balint's syndrome. *Journal of Cognitive Neuroscience* 12:583-600. (\* co-first authors)
13. Recanzone GH, Guard DC, **Phan ML**, and Su TK. (2000). Correlation between the activity of single auditory cortical neurons and sound-localization behavior in the macaque monkey. *Journal of Neurophysiology* 83:2723-39.

14. Recanzone GH, Guard DC, and **Phan ML**. (2000). Frequency and intensity response properties of single neurons in the auditory cortex of the behaving macaque monkey. *Journal of Neurophysiology* 83:2315-31.
15. Kuwahara SK, Shinn TJ, Schreider BD, **Phan ML**, Kotake AN. (1995). Aminopyrine infusion breath test for the determination of changes in P450 metabolism in vivo. *Xenobiotica* 25(9):973-80.

### University and Professional Service

- The Busch Biomedical Grant Program (Rutgers University) Programming Committee
- Faculty Review panel for undergraduate research fellowships (Aresty Research Center)
- Faculty Research Panel Member for the Rutgers Student Society for Stem Cell Research organization
- Member, Rutgers University Strategic Plan: "Efficient and responsive processes, infrastructure, supporting staff, and leadership" Committee,
- Ad Hoc Reviewer  
*Biology Letters; JoVE, the Journal of Visualized Experiments; Neuroscience; Scientific Reports; Learning and Memory*
- Judge, North Jersey Regional Science Fair

### Advising and Teaching

- Thesis/dissertation advisees
 

2018	Alyssa Rodriguez	Rutgers University, G.H. Cook Scholars Program
2018	Neha Narayanan	Rutgers University, Senior Honors Thesis, Psychology
2018	Sruthi Srinivasan	Rutgers University, Senior Honors Thesis, Cell Biology and Neuroscience
2017	Shafali Mahidadia	Rutgers University, Senior Honors Thesis, Biology
2016	Shuk C. Tsoi	Queens College, Neuroscience
- Undergraduate/High School Research Assistants
 

Awards:

Tanya Zubov	
2018	RUP-IMSD-RiSE Program Advisor: Mimi Phan and Benjamin Samuels, Department of Psychology
Nikita Jadav	
2018	Aresty Research Center – Summer Science Program Advisor: Mimi Phan and Benjamin Samuels, Department of Psychology
Dhruvi Trivedi	
2018 – 2019	Aresty Peer Instructor
2017	Aresty Undergraduate Research Fellowship (\$1,000)
2017	Aresty Summer Science Research Program Fellow
Shafali Mahidadia	
2017	Class of 2018 Henry Rutgers Scholar (awarded 2017) <i>Epigenetic mechanisms modulate the formation of memories for conspecific vocalizations in songbirds.</i> Advisor: Mimi Phan and Kasia Bieszczad, Department of Psychology
2016	Conference Funding, 2016, Aresty Research Center Travel Award for 25th Anniversary FUN Social and Poster Session, November 13, 2016. Faculty for Undergraduate Neuroscience Poster Session, satellite meeting of The Society for Neuroscience. San Diego, CA, November 2016
Minali Chintaluri	
2017	Aresty Undergraduate Research Fellowship (\$1,000)

Courtney McDermott

- 2017 Faculty for Undergraduate Neuroscience Student Travel Award. Faculty for Undergraduate Neuroscience Poster Session, satellite meeting of The Society for Neuroscience. Washington, DC, November 2017.
- 2017 Frye Pioneering Research Award. *Sex differences in the effects of statins on neurosteroids*. Advisor: Mimi Phan and Carolyn Pytte, Queens College

Neha Narayanan

- 2017 – 2018 Aresty Peer Instructor
- 2017 Aresty Undergraduate Research Fellowship (\$1240, with Sruthi Srinivasan)
- 2017 Cooper Undergraduate Fellowship Award (\$4,000)
- 2016 Conference Funding, Aresty Research Center. Travel Award for 25th Anniversary FUN Social and Poster Session, November 13, 2016. Faculty for Undergraduate Neuroscience Poster Session, satellite meeting of The Society for Neuroscience. San Diego, CA, November 2016.
- 2016 Aresty Undergraduate Research Fellowship (\$1200, with Sruthi Srinivasan)

Sruthi Srinivasan

- 2017 Aresty Undergraduate Research Fellowship (\$1240 )
- 2016 Conference Funding, Aresty Research Center. Travel Award for 25th Anniversary FUN Social and Poster Session, November 13, 2016. Faculty for Undergraduate Neuroscience Poster Session, satellite meeting of The Society for Neuroscience. San Diego, CA, November 2016.
- 2016 Aresty Undergraduate Research Fellowship (\$1200)

Neven Abdo

- 2017 Honorable Mention: STEM; Undergraduate Research Symposium 2017, Aresty Research Center *The Effect of Hormonal Manipulation on Parental Behaviors Elicited by Offspring Vocal Cues*.  
Advisor: Mimi Phan and Brittany Bell, Department of Psychology
- 2016 Aresty Summer Science Research Program Fellow

Alyssa Rodriguez

- 2017 RUP-IMSD-RiSE Program  
Advisor: Mimi Phan and Kasia Bieszczad, Department of Psychology

Deekshita Valiveti

- 2016 Shors Award in Behavioral Neuroscience; 2016.  
Advisor: Mimi Phan and David Vicario, Department of Psychology

Patrick Tawadros

- 2015 Aresty Summer Science Research Program Fellow

Current:

- |                                 |  |
|---------------------------------|--|
| Summer 2018 – Nikita Jadav      | undergraduate research                       |
| Summer 2018 – Tanya Zubov       | visiting from Winston-Salem State University |
| Summer 2018 – Venkata Rambhatla | undergraduate research                       |
| Summer 2018 – Tonia Liu         | undergraduate research                       |
| Summer 2018 – Eujin Pak         | undergraduate research                       |
| Summer 2018 – David Natanov     | undergraduate research                       |
| Summer 2018 – Mahinaz Mohsen    | undergraduate research                       |
| Summer 2016 – Minali Chintaluri | undergraduate research                       |
| Summer 2016 – Alyssa Rodriguez  | undergraduate research                       |

## Alumni:

2015 – 2018	Neha Narayanan	Aresty Research Assistant	
2015 – 2018	Sruthi Srinivasan	Aresty Research Assistant	
2017 – 2018	Dhruti Trivedi	Aresty Summer Science	
2016 – 2017	Rendell Bernabe	Rutgers University	currently in medical school
2016 – 2017	Kathryn Kusion	Rutgers University	
2016 – 2017	Neven Abdo	Aresty Summer Science	
2016	Akshay Thaper	Rutgers University	
Summer 2016	Julie Wang	Rutgers University	
2015 – 2016	Jorge Jiménez Castillo	visiting from University of Valenica, Spain	
2014 – 2016	Deekshita Valiveti	Rutgers University	
2015 – 2017	Shafali Mahidadia	Rutgers University	currently in medical school
Summer 2015	Patrick Tawadros	Aresty Summer Science	
2014 – 2015	Ankur Choksi	School of Engineering	currently in medical school
Fall 2014	Austin Steady	Rutgers University	
2014	Sara Ghassemzadeh	Rutgers University	
Summer 2014	Matthew Altonji	visiting from Colgate Univeristy	
Summer 2013	Marina Sharobeam	Rutgers University	currently in a STEM profession
Summer 2013	Allison Conway	Rutgers University	
2011 – Summer 2013	Joaquim Santos	Rutgers University	currently in a STEM profession
Summer 2014 – 2015	Mir Siddiqi	Rutgers University	
2010 – 2011	Mona Sisodia	Rutgers University	currently in a STEM profession
2009 – 2011	Utsav Aiya	Rutgers University	currently in medical school
Summer 2009	Catherine dePalma	Rutgers University	
Summer 2009	Mona Elgohail	Barnard College	currently in graduate school
2009 – 2010	Nazia Fatima	Aresty Research Assistant	
2007 – 2008	Pratik Shukla, M.D.	Rutgers University	currently a medical practitioner
2005 – 2006	Jared Lewinski	Rutgers University	
2005 – 2006	Matthew Carter	Rutgers University	currently in a STEM profession
2005 – 2006	Adam Mussel	Rutgers University	currently in a STEM profession
2005 – 2006	Yosef Simen	Rutgers University	

### • Outreach Advising

- 1) Faculty Mentor: ArtSci - a community science outreach program consisting of Rutgers students presenting science and art tutorials to local elementary school children, 2016 – current
- 2) Co-founder, Adventures in Science (a community science outreach program consisting of UC Davis students presenting science tutorials to local junior high students), 1994 – 1995

### • Undergraduate Teaching

Conditioning and Learning 830:311, Psychology Department (Rutgers University)  
General Psychology 830:101, Psychology Department (Rutgers University)  
Learning Processes 830:311, Psychology Department (Rutgers University)  
Perception and Cognition Laboratory 830:302, Psychology Department (Rutgers University)  
Physiological Psychology 830:313, Psychology Department (Rutgers University)

### Poster Presentations featuring Undergraduate Mentee\*

1. Srinivasan S\*, Narayanan N\*, Chintaluri M\*, Trivedi D\*, Soyman E, Phan M, Vicario D. Effects of Statins on Auditory Memory and Imitative Learning. Poster | STEM | Psychology 14th Annual Undergraduate Research Symposium, Aresty Research Center, Rutgers University, Spring 2018.
2. Mcdermott, CR\*, Narayanan N, Srinivasan S, Phan ML, Vicario DS, Pytte, CL. Simvastatin increases neuroestradiol in female zebra finches. The Society for Neuroscience. Washington, DC, November 2017.
3. Phan ML, Jiménez Castillo J\*, Mahidadia S\*, Saad S, Vicario DS, Bieszczad KM. Histone modification enables

song-specific auditory memories in an avian model. The Society for Neuroscience. San Diego, CA, November 2016.

4. Valiveti D, Srinivasan S\*, Vicario DS, Phan ML. Statins affect the quality of auditory memories and performance on a behavioral discrimination paradigm in an avian model. The Society for Neuroscience. San Diego, CA, November 2016.
5. Neha Narayanan\*. Parental Experience Affects How the Brain Processes Social Auditory Information Poster 393 | PM (12:30 - 2:00) | STEM | Psychology 12th Annual Undergraduate Research Symposium, Aresty Research Center, Rutgers University, Spring 2016.
6. Shafali Mahidadia\*. Epigenetic Mechanisms of Vocal Learning and Memory Poster 385 | PM (12:30 - 2:00) | STEM | Psychology 12th Annual Undergraduate Research Symposium, Aresty Research Center, Rutgers University, Spring 2016.
7. Sruthi Srinivasan\*. The Effect of Statins on Auditory Memory and Imitative Learning Poster 394 | PM (12:30 - 2:00) | STEM | Psychology 12th Annual Undergraduate Research Symposium, Aresty Research Center, Rutgers University, Spring 2016.
8. Deekshita Valiveti\*. Effects of Chronic Exposure to Simvastatin on Learning and Memory in the Avian Auditory Forebrain Poster 395 | PM (12:30 - 2:00) | STEM | Psychology 12th Annual Undergraduate Research Symposium, Aresty Research Center, Rutgers University, Spring 2016.
9. M. Siddiqi\*, E. Soyman, M. Phan, D. Vicario. Developmental Trajectory Following Experience-Based Hemispheric Lateralization Of Vocal Processing. Undergraduate Research Symposium. Aresty Research Center , Rutgers University, Spring 2015.
10. A. Barrientos\*, S. Tsoi, A. Qureshi\*, J. Moncion\*, C. Pytte, D. Vicario, M. Phan. Cholesterol-lowering Drugs Alter Neuron Migration in a Juvenile Songbird Model System. Faculty for Undergraduate Neuroscience Poster Session, satellite meeting of the Meeting of the Society for Neuroscience. Washington, DC, November 17, 2014.
11. B.A. Bell, M.L. Phan, D.S. Vicario. Neural responses to vocalizations in the songbird auditory forebrain differentially reflect social and instrumental reward prediction. 2014 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014. Online.
12. S.C. Tsoi, A. Qureshi\*, A. Barrientos\*, U.V. Aiya, M.L. Pierce, E. Soyman, D. Stalbow\*, S. Ribeiro\*, D.S. Vicario, C.L. Pytte, M.L. Phan. Effects of statins on auditory memories, neurogenesis and neuronal morphology in the zebra finch. 2014 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014. Online.
13. J. Moncion\*, S. Tsoi, A. Qureshi\*, C. Pytte, D. Vicario, M. Phan. Cholesterol-lowering Drugs Alter Neuronal Morphology in a Juvenile Songbird Model System. CUNY Summer undergraduate Research Program (C-SURP) Poster Session. Macaulay Honors College, New York, NY. August 7, 2014.
14. S. Ribeiro\*, S. Tsoi, M. Phan, D. Vicario, C. Pytte. The effects of three types of statins on neuronal survival and auditory memory. Queens College Chapter of Sigma Xi Undergraduate Research Poster Session. Queens College, CUNY; 65-30 Kissena Blvd, Flushing, NY. April 9, 2014.
15. A. Barrientos\*, S. Tsoi, D. Stalbow\*, P. Pravalis\*, M. Phan, C. Pytte. Chronic statin exposure during the zebra finch sensorimotor period for song learning decreases new glia survival in HVC. Queens College Chapter of Sigma Xi Undergraduate Research Poster Session. Queens College, CUNY; April 9, 2014.
16. D. Stalbow\*, P. Pravalis\*, S. Tsoi, C. Pytte, D. Vicario, M. Phan. The effect of cholesterol-lowering drugs

on adult neurogenesis. Faculty for Undergraduate Neuroscience at the Society for Neuroscience Annual Meeting, San Diego 2013.

17. D. Stalbow\*, P. Pravasilis\*, S. Tsoi, C. Pytte and M. Phan. The Effect of Cholesterol-Lowering Drugs on Adult Neurogenesis. The Undergraduate Science Research Day- Queens College (QC-USRD-2013).
18. A. Barrientos\*, S. Tsoi, D. Stalbow\*, P. Pravasilis\*, M. Phan, C. Pytte. The Effect of Statins on Neuron Survival in Song Motor Nucleus HVC of the Zebra Finch. The Undergraduate Science Research Day- Queens College (QC-USRD-2013).
19. U. Aiya, M.L. Pierce, J. Santos\*, E. Soyman, S.C. Tsoi, D.S. Vicario, C.L. Pytte, M.L. Phan. Effects of statins on the quality of auditory memories and rate of neurogenesis: An avian model. 2013 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2013. Online.
20. S.C. Tsoi, U.V. Aiya\*, M.L. Pierce, M.L. Phan, D.S. Vicario, C.L. Pytte. Adult neurogenesis and auditory responses in the songbird forebrain. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online.
21. U. Aiya\*, P. Shukla\*, M. Pierce, D. Vicario, M. Phan. Using temporary inactivation to study auditory processing and interactions in the songbird forebrain. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011. Online.
22. U. Aiya\*, M. Phan, D. Vicario. Using Temporary Inactivation and Multielectrode Recording to Study Auditory Responses in Avian Forebrain. The Aresty Undergraduate Research Symposium- Rutgers University, Spring 2010.
23. N. Fatima\*, M. Phan, D. Vicario. An Avian Model of Cholesterol and Statin Usage. The Aresty Undergraduate Research Symposium- Rutgers University, Spring 2010.
24. M.L. Pierce, M.L. Phan, P.A. Shukla\*, D.S. Vicario. Simultaneous population recordings in songbird NCM and CM during processing of species-specific sounds. 2008 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2008. Online.

### **In the news**

Media coverage: *Phan ML and Vicario DS. Hemispheric differences in processing of vocalizations depend on early experience. Proc. Natl. Acad. Sci. USA 107:2301-6.*

- Rutgers Highlights: Branson, Ken. "Which Side Are You On? Birds Need Tutoring to Find Out"
- "Bird Brains." Rutgers Magazine Spring 2010.
- Rutgers.edu banner story Spring 2010.
- "U. composes connection between birdsongs and language". Vaibhavi Shah. The Daily Targum (Rutgers University Student Paper) 04/05/10.

Media coverage: *Phan, ML, Pytte, CL, and Vicario, DS. (2006) Early auditory experience generates long-lasting memories that may subservise vocal learning in songbirds. Proc. Natl. Acad. Sci. USA 103:1088-93.*

- "Babies Babble." Rutgers Magazine Fall 2006. Branson, Ken.
- "Zebra Finches Remember Songs Dad Sang." Rutgers Focus 23 January 2006.
- Flores, Graciela. "Sing It to Me." Natural History Magazine, Inc. April 2006.
- Regan, Patrick. Inside Science. News Segment on NJN: New Jersey Public Television and Radio. January 2006.
- New York Academy of Sciences. Learning to Hear: Animal, Computational and Neuroimaging Studies of Language Development., mini-conference ("The Role of Early Auditory Memories in Songbird Vocal Learning" David S. Vicario). Oct 26, 2006 • 3:00 PM - 5:30 PM