

*Curriculum Vitae*  
*Vivien A. Casagrande*  
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## **CURRICULUM VITAE**

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<http://sitemason.vanderbilt.edu/site/jsRrWg>

### **RESEARCH STATEMENT**

The overall goal of this research is to understand how the visual thalamus and cortex interact to construct our perceptual world.

The first project explores the unconventional proposal that the primary sensory information received by the visual cortex from the visual thalamus [e.g., the lateral geniculate nucleus (LGN)] is not purely visual but rather visual information, primed by inputs from other sensory modalities. In this project, we hypothesize that the primate brain achieves fast and accurate decision-making in part due to its ability to focus, right from the beginning, on relevant aspects of inputs from all sense organs without appreciating all the details presented by each sense organ. Our specific hypothesis is that auditory and visual information are combined in a task dependent manner in the visual thalamus before this message is processed in cortex.

In a second project, we test the hypothesis that all thalamic nuclei contain some cell groups that act as drivers (send the main message) and some that act as modulators for multiple cortical areas, thus mediating the generation of an array of diverse cortical functions. The thalamus is not simply a passive relay to cortex. Instead, just as primary visual cortex (V1) depends on LGN, the secondary visual area (V2) and the middle temporal visual area (MT) depend on a combination of dedicated pathways through the thalamus (e.g., pulvinar) and direct feedforward connections from V1. This arrangement allows new properties to emerge at both the thalamic and cortical levels through dynamic loops.

A third project focuses on communication between cells in different areas of visual cortex and examines how visual messages are coded and transmitted from lower to higher visual areas and what the role of feedback is in this process.

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We use a variety of electrophysiological, anatomical, and imaging approaches to address these questions including single unit and multielectrode recording in both anesthetized and awake behaving primates, light, electron microscopic and confocal examination of cells and circuits, optical imaging of intrinsic signals and pharmacological manipulation.

Our laboratory also has had a long standing interest in the evolution of the visual system. Therefore, we continue to use a comparative approach to examine for similarities and differences in the organization of the visual system in a variety of primate species.

### **EDUCATION**

1964                      B.A. University of Colorado (Psychology, major; Biology, minor)

1973                      Ph.D. Duke University Physiological Psychology; Sponsor: Dr. I. T. Diamond

### **POSITIONS AND FELLOWSHIPS**

1965-1967    Research Assistant, Arthur D. Little, Inc., Cambridge, Massachusetts

1967-1968    United States Public Health Service Traineeship in Physiological Psychology, Duke University (sponsor: Dr. I. T. Diamond)

1968-1970    United States Public Health Service Fellowship, Duke University

1970-1972    United States Public Health Service Fellowship, Duke University

1972-1973    National Institutes of Health, NIGMS, Behavioral Medicine, Postdoctoral Fellowship, Duke University

1973-1975    Research Associate, Department of Anatomy, University of Wisconsin (Postdoctoral Supervisor: Dr. R.W. Guillery)

1975-1980    Assistant Professor, Departments of Anatomy (primary appointment) and Psychology (secondary appointment), Vanderbilt University

1980-present Senior Fellow and Investigator, John F. Kennedy Center for Research on Human Development, Peabody College

1980-1986    Associate Professor, Departments of Cell Biology (formerly Anatomy) and Psychology, Vanderbilt University

1986-present Professor, Departments of Cell & Developmental Biology (formerly Cell Biology) and Psychology, Vanderbilt University

1988-1992    Co-Director for Biomedical Sciences, Kennedy Center for Mental Retardation

1997-present Professor, Department of Ophthalmology and Visual Sciences (secondary

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appointment), Vanderbilt Medical School

### **ACADEMIC HONORS AND AWARDS**

1967-1968; 1970-72	NIH Predoctoral Traineeships
1972-1973	NIH NRSA Postdoctoral Fellowship
1977-1980	Academic Investigator Salary Award
1981	The Charles Judson Herrick Award for meritorious contributions to comparative neurology, presented by the American Association of Anatomists
1981-1986	Research Career Development Award
1998	President, Cajal Club
2006	Fellow, American Association for the Advancement of Science
2011	Fellow of the American Association of Anatomists

### **TEACHING EXPERIENCE**

Introductory Psychology (Graduate Assistant), Duke University

Mechanisms of Visual Perception (Tutorial), Duke University

Central Nervous System (Teaching Assistant), University of Wisconsin  
The Nervous System, Vanderbilt University (Lecturer)

Animal Behavior, Vanderbilt University (Course Director)

Special Topics in Neuroscience, Vanderbilt University (Course Director)  
Topics have included: Development of the Nervous System; Structure and Function of Dendrites; Structure and Function of the Vertebrate Eye; Limbic System; History of Neuroscience; Development of the Visual System; Structure and Function of the Tectum; Methods in Neuroscience; Parallel Processing in the Visual System; The Role of Neural Activity in Neural Development; Current issues in Neural Development; Current Methods in Neurobiology; Designing Good Experiments in Neurobiology, Imaging Methods: Cells to Brains

Basic Course in Department of Ophthalmology, Vanderbilt University (Guest Lecturer)

Neuroanatomy, Meharry Medical College (Guest Lecturer)

Seminar on Brain Imaging - Department of Psychiatry, Vanderbilt University (Guest Lecturer)

Cell Biology - Department of Cell Biology, Vanderbilt University

Neural Development - Department of Psychology, Vanderbilt University

The Visual System - Cross Departmental Course, Vanderbilt University (Lecturer)

Cell and Molecular Neuroscience - Department of Cell Biology, Vanderbilt University (Course Director)

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Cellular and Integrative Neuroscience - Departments of Cell Biology, Pharmacology, Physiology and Biophysics, and Center for Neuroscience, Vanderbilt University (Course Director)

Interdisciplinary Graduate Course - Vanderbilt Medical School (Lecturer)

Fundamentals of Neuroscience - Vanderbilt Medical School (Lecturer)

Special Topics in Cell and Developmental Biology - Vanderbilt Medical School (Lecturer)

Systems Neuroscience (NURO 340) (Course Director)

**ADMINISTRATION AND COMMITTEES: NATIONAL & INTERNATIONAL**

National Institutes of Mental Health Fellowship Review Committee, 1975-1977

National Institutes of Health Bio-Psychology Study Section, 1979-1983

National Institutes of Health Behavioral and Neurosciences Fellowship Ad Hoc Review Group, 1979-1983

National Science Foundation, Outside Reviewer

National Eye Institute, Visual Sciences A Study Section, Ad Hoc Reviewer

National Eye Institute, Visual Sciences B Study Section, Ad Hoc Reviewer

Panel for Presidential Young Investigator Awards (NSF), Member, 1989

Association for Research in Vision and Ophthalmology, Program Planning Committee, 1989-present; Chairman, Anatomy and Pathology Subsection, 1990-1991

Selection Committee for 1991 Society for Neuroscience, Young Investigator Award

Invited Organizer of American Association of Anatomists Cajal Club Symposium, 1992: The Role of Glia in Neural Pattern Formation

Association for Research in Vision and Ophthalmology, Strategic Planning Committee, 1991-1992 (chair, 1992)

Mini-Symposium organizer for the Association for Research in Vision and Ophthalmology 1992: A new look at parallel vision channels in primates

C.J. Herrick Award Committee, 1993-1996

Cajal Club Nomination Committee for President and Program Chair, 1992-1994

University of Kansas MRRC Outsider Reviewer - Neuroscience Cores, 1993

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National Eye Institute Visual Sciences B Study Section, 1995-1998

Ad Hoc reviewer, National Science Foundation 1976-present

Cajal Club President Elect (Nissl Body) 1997; President (Nucleolus) 1998

Dissertation Committee for D. A. Barker, University of Sydney, (Australia) 1998

NSF/EPSCoR External Advisory Committee 1996-2000

Ad Hoc grant reviewer, Wellcome Trust (1999, 2000, 2002)

Society for Neuroscience Communications and Chapters Committee, 1997-2001

Board Member, Cajal Club Foundation Corporation, 1997-present

University of Sydney AU thesis committee (Andrew White)

Chairperson, National Eye Institute CDA Review Panel, 2006

Medical Research Council (MRC) review (UK) 2007

Editorial Consultant for: *Science*, *J. Comparative and Physiological Psychology*, *Physiology & Behavior*, *Neuroscience*, *Journal of Neuroscience*, *J. Neurophysiology*, *Vision Research*, *Developmental Brain Research*, *Brain Research Bulletin*, *Brain Research*, *Behavioral and Brain Science*, *Laboratory Animal Science*, *Brain Behavior and Evolution*, *Journal of Medical Primatology*, *Investigative Ophthalmology and Visual Science*, *Psychological Bulletin*, *Current Eye Research*, *Visual Neuroscience*, *Cerebral Cortex*, *Physiology and Behavior*; *Laboratory Animal Science*, *Anatomical Record*, *Trends in Neurosciences*, *Proceedings for the National Academy of Sciences*, *Experimental Brain Research*, *Nature*, *J. Neurocytology*, *J. Physiology*, *Lasers in Surgery & Medicine*, *Neuroscience*, *European Journal of Neuroscience*, *J. Neuroscience Methods*; *Neuron*

Editorial Board: *J. Comparative Neurology*, 1987-2000; *Visual Neuroscience*, 1989-1991; 1996-2000; *Cerebral Cortex* 2006-present; *Eye and Brain* 2009-present; *Frontiers in Neuroscience* 2008-present

Associate Editor: *Visual Neuroscience*, 1991-1993, *American Journal on Mental Retardation*, 1993-1998; *Journal of Experimental and Integrative Medicine* 2011-Present

Faculty of 1,000 reviewer, 2001-present

Ad Hoc reviewer, NHMRC Project Grants (2000, 2002)

American Association Anatomists EB 2000 Program Committee Meeting

Ad Hoc grant reviewer, Wellcome Trust (1999, 2000, 2002)

Ad Hoc reviewer Integrative, Functional and Cognitive Neuroscience - 8 (IFCN-8) study section, NIH (2003)

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M Ad Hoc Reviewer ,NIH Study Section ZRG1 IFCN-L (03) (2010)

**ADMINISTRATION AND COMMITTEES: LOCAL**

President, Middle Tennessee Chapter for the Society for Neuroscience, 1977-1978

Standing Policy Committee, Biomedical Sciences, 1977-1980

Biomedical Research Support Grant Advisory Board, 1978-1980

Neurobiology Steering Committee, 1978-1981; Program Faculty, 1978-81

Neurobiology Training and Selection Committee, 1978-1982

Visual Science Training Program - Seminar and Speakers Committee, 1978-1979

Visual Science Training Program Faculty, 1976-present

Graduate Studies Committee Psychology, 1979-1981

Graduate Studies Committee Anatomy, 1979-1982

Committee on Special Awards, 1982-1984

Kennedy Center Scientist and Participant in Core Program, 1982-present

Head Seminar Series, Anatomy, 1983

Director of Graduate Studies, Anatomy, 1984-1985

Temporary Committee, Graduate Program, Anatomy 1983-1985

Director of Graduate Studies, Cell Biology, 1985-1990

Graduate Student Conduct Council, 1984-1986

Search Committee for the Director of the Division of Sponsored Research, 1985

Admissions Committee, Sigma Xi, 1983-present

Chair, Kennedy Center Colloquium Committee, 1985-1989

Graduate Faculty Delegate Assembly, 1985-1989

Search Committee for the Director of the Kennedy Center, 1987-1988

Committee for Health Sciences: Protection of Human Subjects, 1987-1988

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Member, Graduate Education Committee, 1988-1989

Co-Chair, Visual Sciences Training Program Seminar Committee, 1987-1989

Director, Neuroscience Research Cluster, Kennedy Center, 1988-1992

Associate Director for Biomedical Research, Kennedy Center, 1988-1991

Chair, Search Committee for Director of Development Neuroscience Center, 1988-1991

Credentials Committee, Kennedy Center, 1990-1997

Head, Animal Care Core, Visual Sciences Core Module, 1989-1991

Head, Neuroscience Core, Kennedy Center Core Module, 1989-1991

Users Committee, Kennedy Center, 1990-1994

Graduate Advisory Committee, Cell Biology, 1993-1995

University Animal Care Committee, 1992-1994

University Faculty Senate, Representing the School of Medicine, 1993-1996

Committee on Academic Policies and Services, 1993-1996

Cell Biology Appointment and Promotions Committee, 1993-2001

Task Force on Graduate and Postgraduate Education (Vanderbilt Medical School), 1996

Chair Membership Committee Kennedy Center, 1993-1997

Dean Chapman, Special Advisory Committee, 1998

Nicholas Hobbs Society Grant Awards Committee, 1997

Graduate Neuroscience Committee, Vanderbilt University, 1997-present

Center for Integrative & Cognitive Neuroscience, 1998-present

Reviewer for Hobbs Society grants, 1999

Kennedy Center Young Scientist and Graduate Awards Committee, 1999

Molecular Neuroscience Curriculum Committee, 1999-present

Integrative Neuroscience Graduate Admissions Committee, 2000-present

Neuroscience Graduate Programs: Student Oversight Committee, 2000-2002

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Vanderbilt Kennedy Center Membership Committee, 2001-2005

Kennedy Center Steering Committee, 2002-present

Graduate Faculty Delegate Assembly representing Cell & Developmental Biology, 2002-present

Steering Committee for Graduate Education Department of Cell & Developmental Biology,  
2002-present

Institutional Animal Care and Use Committee, 2003-2005

Master in Laboratory Science Committee 2003-present

Executive Committee for the Vision Training Grant, 2003-present

University Faculty Senate Representative for the School of Medicine, 2003-2005

Vision Training Program Executive Committee, 2003-present

Graduate Faculty Delegate Assembly Representative for the Department of Cell and  
Developmental Biology, 2004-present

Cell and Developmental Biology Curriculum Committee, 2004-present

Environmental Enrichment Committee, 2005-2007

Interdisciplinary Collaborations Task Force, 2006-present

Chair search committee for the Department of Hearing and Speech Sciences 2007-2008

Outstanding Student in Cell and Developmental Biology Selection Committee, 2006-present

Cell and Developmental Biology Mentoring Committee Chair (Dr. Melanie Ohi) 2007-present

Search Committee for Vanderbilt Brain Institute Director 2007-present

Basic Sciences Planning-Enhancing Communication committee 2007-present

Neuroscience Graduate Program Curriculum Committee, 2007-present

Module director Cell Imaging Core (Vision Research Core Grant) 2007-present

Neuroscience Steering Committee, 2009-present

Neuroscience Undergraduate Curriculum Committee, 2008-present

Junior Faculty leadership Development Program CO-director 2009-present

Executive Committee for the Middle Tennessee Chapter of the Society for Neuroscience,



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2009-present

President Middle Tennessee Chapter for the Society for Neuroscience 2009-Present

Advisory Board Conte Grant Supplement 2010-present

Search Committee for two faculty positions, Department of Speech and Hearing Vanderbilt Medical School 2011

Neuroscience Steering Committee 2011-present

Vanderbilt Brain Institute Interim Steering Committee, Cell and Developmental Biology Representative, 2011-present

### **PROFESSIONAL SOCIETIES**

Sigma Xi

Cajal Club

Society for Neuroscience

The Association for Research in Vision and Ophthalmology

FASEB

American Association of Anatomists

Middle Tennessee Chapter for Society for Neuroscience

Visual Sciences Society

American Physiological Society

### **INVITED PRESENTATIONS**

1973 NRP Work Session on "Sensory-Motor Function of Midbrain Tectum": *Superior colliculus in tree shrew, structural and functional division into superficial and deep layers* (Cambridge, MA (Massachusetts Institute of Technology))

1974 International Conference on Comparative Aspects of Telencephalic Organization: *The effects of visual deprivation in various mammals* (Caracas, Venezuela)

1978 Second International Conference on Myopia: *Ciliary zonule dysplasia in lid suture myopia* (Yokohama, Japan)

1978 Eleventh Symposium of the Center for Visual Science: Comparative Aspects of Visual Deprivation: *Visual deprivation in animals and their analogs in human visual pathology* (Rochester, NY)

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- 1979 Fourth Annual Interdisciplinary Conference: *Binocular interactions in the developing primate visual system* (Jackson Hole, WY)
- 1979 Society for Neuroscience Regional Meeting: *Binocular interaction in the developing primate visual system* (Birmingham, AL)
- 1980 Third International Conference on Myopia: *Atropine affects lid suture myopia development* (Copenhagen, Denmark)
- 1980 Colloquium staged by the School of Optometry at the University of Alabama-Birmingham (Birmingham, AL )
- 1980 Colloquium staged by the Department of Psychology at Duke University (Durham, NC)
- 1980 Winter Conference on Brain Research, Colorado (Keystone, CO)
- 1981 Winter Conference on Brain Research, Colorado (Keystone, CO)
- 1982 IXth Congress of the International Primatological Society: *Aspects of visual system development in tree shrew* (Atlanta, GA)
- 1982 Southeast ARVO Conference: *Development of lamination in the lateral geniculate* (Charleston, SC (Medical University of South Carolina))
- 1982 Colloquium staged by the Barrow Neurological Institute (Phoenix, AZ)
- 1982 Colloquium staged by the Department of Anatomy at the University of Wisconsin (Madison, WI)
- 1982 Colloquium staged by the Department of Anatomy at the University of Michigan (Ann Arbor, MI)
- 1982 Winter Conference on Brain Research (Steamboat Springs, CO)
- 1983 Second International Conference on Event Perception: *Comparative aspects of primate visual system* (Nashville, TN (Vanderbilt University))
- 1983 Colloquium staged by the National Institutes of Health (Bethesda, MD) (guest of Dr. Wurtz)
- 1983 Colloquium staged by the Fort Ruckers Sensory Sciences Division (Fort Ruckers, AL)
- 1983 Colloquium staged by the National Institutes of Health (Bethesda, MD) (guest of Drs. Ungerleider and Mishkin)
- 1983 Colloquium staged by the Neuroscience Chapter of the University of Alabama-Birmingham (Birmingham, AL)
- 1983 Colloquium staged by Department of Anatomy at University of Tennessee-Memphis

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- 1983 Winter Conference on Brain Research (Keystone, CO)
- 1984 West Coast Regional Developmental Biology Conference: *Afferent influences on cell layer formation* (Tahoe, CA)
- 1984 Xth Congress of the International Primatological Society: *Aspects of sensory system organization and plasticity in primates* (Nairobi, Kenya)
- 1984 Colloquium staged by Department of Psychology at Massachusetts Institute of Technology (Cambridge, MA)
- 1984 Colloquium staged by the Department of Psychobiology at University of California-Irvine
- 1984 Colloquium staged by the Section of Neurobiology at Brown University (Providence, RI)
- 1984 Winter Conference on Brain Research (Steamboat Springs, CO)
- 1985 Colloquium staged by the Department of at University of Tennessee-Memphis
- 1985 Colloquium staged by the Neuroscience Institute at the University of Oregon (Eugene, OR)
- 1985 Winter Conference on Brain Research (Vail, CO)
- 1986 Cajal Club Symposium on Developmental Neuronal Plasticity, American Association of Anatomists Convention: *Normal and abnormal development of the lateral geniculate nucleus* (Reno, NV)
- 1986 College of Neurophysics: Organization of the Brain, International Center for Theoretical Physics: *Three Lectures on brain development* (Trieste, Italy)
- 1986 Colloquium staged as part of the Neuroscience Series of the Marine Biological Institute (Woods Hole, MA)
- 1986 Colloquium staged by the Department of Neuroanatomy at Oxford University (Oxford, UK)
- 1986 Winter Conference on Brain Research (Keystone, CO)
- 1987 Colloquium staged by the Department of Anatomy at the University of Wisconsin (Madison, WI)
- 1987 Winter Conference on Brain Research (Vail, CO)
- 1988 Colloquium staged by Department of Neurobiology and Behavior at State University of New York-Stony Brook
- 1988 Colloquium staged by Department of Biology at Tennessee State University (Nashville, TN)

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- 1988 Winter Conference on Brain Research (Steamboat Springs, CO)
- 1988 Colloquium staged by the University of Kansas Medical Center (Kansas City, KS)
- 1989 Winter Conference on Brain Research (Snowbird, UT): *Central reorganization after injury* (speaker); *Recent evidence concerning the roles of activity and surface factors in sensory system development* (speaker and panel organizer)
- 1989 Colloquium staged by the Department of Anatomy, University of Wisconsin (Madison, WI): *Interactions between neurons and glia in laminar development*
- 1989 Colloquium staged by the Wisconsin Regional Primate Center (Madison, WI): *Parallel information channels in primates*
- 1989 Colloquium staged by the Neuroscience Seminar Series at Johns Hopkins School of Medicine (Baltimore, MD): *Intrinsic and extrinsic factors in the development of the lateral geniculate nucleus*
- 1989 Colloquium staged by the Department of Anatomy and Neurobiology, St. Louis University School of Medicine (St. Louis, MO): *Interactions between neurons and between neurons and glia in the formation of cell layers*
- 1990 Conference on Neural Regeneration and Transplantation: *The morphological and functional basis (Plasticity in the retinogeniculate and geniculostriate pathways)* (Singapore)
- 1990 American Academy of Optometry Symposium: *A new look at parallel visual channels* (Nashville, TN)
- 1990 Colloquium staged by the Department of Ophthalmology, University of British Columbia (Vancouver, BC, Canada): *Development of neural architecture in the visual system: intrinsic and extrinsic factors*
- 1990 Colloquium staged by the Neuroscience and Behavior Program, University of Massachusetts-Amherst: *Development of neural architecture in the visual system: intrinsic and extrinsic factors*
- 1991 Winter Conference on Brain Research (Vail, CO): *Extrinsic and intrinsic influences on the development of sensory system topography* (workshop chair)
- 1992 Cajal Club Symposium: *The role of glia in neural pattern formation* (New York, NY)
- 1992 American Association for Research in Vision and Ophthalmology (Sarasota, FL): *A new look at parallel visual pathways in primates* (symposium organizer and speaker)
- 1992 Winter Conference on Brain Research (Steamboat Springs, CO): *What are the blobs?*
- 1993 American Association of Anatomists Presidential Symposium: *Cellular organization of cerebral cortex* (San Diego, CA) (speaker)

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- 1993 Winter Conference on Brain Research (Whistler, BC, Canada): *The retina and its targets: how are early developmental events coordinated?*
- 1993 Visiting Scholars Program, Vision Science Research Center, University of Alabama-Birmingham: *Parallel visual pathways: a new perspective*
- 1993 Colloquium staged by the Department of Anatomy at the University of Mississippi Medical School (Jackson, MS): *Parallel visual pathways: a new perspective*
- 1993 Colloquia staged by the Department of Psychology at University of North Carolina-Chapel Hill: *Parallel visual pathways; Challenges faced by women in science*
- 1993 Colloquium staged by the Department of Anatomical Science and Neurobiology at the University of Louisville Health Science Center, (Louisville, KY): *Parallel visual pathways in primates: new perspectives*
- 1994 Symposium on Neural Dynamics (Washington, DC): *Parallel pathways* (invited speaker)
- 1994 Winter Conference on Brain Research (Snowbird, UT): *How plastic are developing retinal ganglion cells?*
- 1995 25th Cambridge Ophthalmological Symposium (Cambridge, United Kingdom): *The neuronal pathways of binocular vision and stereopsis*
- 1995 Winter Conference on Brain Research (Steamboat Springs, CO): *Why do we have multiple thalamic pathways to sensory cortex?*
- 1995 Colloquium staged by the Department of Anatomy and Neurobiology at the Boston University School of Medicine, (Boston, MA): *Parallel processing of visual information: new perspectives*
- 1995 Colloquium staged by the Department of Human Anatomy at the University of Oxford (Oxford, UK): *Parallel processing of visual information: new perspectives*
- 1996 Society for Neuroscience National Meeting (Washington, DC): *The individual investigator in systems neurobiology* (invited speaker); Women in Neuroscience (WIN) symposium: *Running a laboratory: issues in scientific style*
- 1996 Colloquium staged by the Center for Neuroscience at University of California-Davis: *Parallel pathways and functional modules: insights into visual cortical function*
- 1996 Winter Conference on Brain Research (Snowmass Village, CO)
- 1997 Visual Sciences Symposium in dedication of the Vision Center at the University of Tennessee Health Sciences Center (Memphis, TN)
- 1999 Colloquium at the A.A. Bogomoletz Institute of Physiology at the National Academy of Sciences of Ukraine (Kiev, Ukraine): *The visual brain of primates: progress and puzzles*
- 1997 Winter Conference on Brain Research (Breckenridge, CO): *Optical imaging and*

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- functional modules: changing views of hypercolumns* (organizer and speaker); *The rainbow's end: from cones to color perception* (invited speaker)
- 1997 Wisconsin Regional Primate Research Center, University of Wisconsin (Madison, WI): *The visual brain of primates: progress and puzzles*
- 1997 Colloquium staged by the Department of Anatomy at the University of Wisconsin Medical School (Madison, WI): *A new look at the functional organization of primate geniculocortical and corticocortical visual pathways*
- 1997 Colloquium staged by the Visiting Scholar Program at the Visual Science Research Center at the University of Alabama-Birmingham: *The visual brain of primates: progress and puzzles on parallel pathways in cortex*
- 1997 Inaugural Symposium, Center for Vision Research, University of Tennessee-Memphis: *Vision in primates: progress and puzzles*
- 1998 Colloquium staged by the Center for Cognitive and Behavioral Science at State University of New York-Stony Brook: *Vision in primates: progress and puzzles*
- 1999 Winter Conference on Brain Research, (Snowmass Village, CO): *What's so special about the development of the primate visual system?*
- 1999 Department of Biology, Georgia State University (Atlanta, GA) *Parallel pathways and functional modules: insights into visual function in primates*
- 2000 Colloquium staged by the University of Alabama at Birmingham: *Anatomy of central visual pathways*
- 2000 Colloquium staged by the American Association for Laboratory Animal Science's District IV Meeting (Knoxville, TN): *Seeing the light: what comparative studies can tell us about human vision*
- 2000 Kaas Festschrift: *Seeing the light* (Nashville, TN, (Vanderbilt University))
- 2001 Anthropoid Origins Symposium: *Conservation and change in primate vision* (Pittsburgh, PA (Carnegie Natural History Museum))
- 2001 Cajal Club/Cajal Institute International Conference: Changing Views of Cajal's Neuron (Madrid, Spain): *Static and dynamic views of visual cortical organization*
- 2001 XXXIVth International Congress of Physiological Sciences (Christchurch, New Zealand / Manly, Australia): *Partitioning the image: how many parallel pathways are there and what are they doing?*
- 2001 Colloquium staged by the Vision, Touch and Hearing Research Centre within the Department of Physiology and Pharmacology at the University of Queensland (Brisbane, Australia): *The lateral geniculate nucleus revisited: new messages from down under*
- 2001 Colloquium staged by the Department of Physiology, University of Sydney (Sydney,

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- Australia): *The lateral geniculate nucleus revisited: new messages from down under*
- 2002 Neuroscience Seminar, Vanderbilt Integrative and Cognitive Neuroscience Program, Vanderbilt University (Nashville, TN): *Why does the thalamus exist?*
- 2002 Society for Neuroscience Symposium (Orlando, FL): *Visual cortex: functional organization* (chair)
- 2003 Structure, Function and Evolution of the Primate Visual System (Tübingen, Germany): *The role of the lateral geniculate nucleus and parallel pathways in a dynamic system*
- 2003 Winter Conference on Brain Research (Snowbird, UT): *So many areas, so little time: transformations of visual information in extrastriate cortex* (invited panel speaker)
- 2003 Colloquium staged by the Department of Ophthalmology and Visual Science within the Moran Eye Center at the University of Utah School of Medicine (Salt Lake City, UT): *The geometry of feature maps in primate striate and extrastriate cortex examined with optical imaging*
- 2003 Howard Hughes Medical Lecture at the Department of Biology at Murray State University (Murray, KY): *The language of vision: pathways, maps and modules*
- 2003 Colloquium staged by the Department of Neurology at Vanderbilt University (Nashville, TN): *The role of the lateral geniculate nucleus in a dynamic system*
- 2004 Colloquium staged by the Department of Physiology and Neurobiological Branch of the Szeged Division of the Hungarian Academy of Sciences (Szeged, Hungary): *Constructing visual reality: the impact of attention and motor planning on the lateral geniculate nucleus*
- 2004 "Cortical Function: A View from the Thalamus" at the University of Wisconsin (Madison, Wisconsin ()): *The impact of attention and motor planning on the lateral geniculate nucleus (LGN)* (symposium co-organizer)
- 2004 Colloquium staged by the Department of Physiology and Neurobiological Branch of the Szeged Division of the Hungarian Academy of Sciences (Szeged, Hungary): *Constructing visual reality: the impact of attention and motor planning on the lateral geniculate nucleus*
- 2004 Colloquium staged by the Vanderbilt Institute of Imaging Science (VUIIS) (Nashville, TN): *The geometry of feature maps in primate striate and extrastriate cortex examined with optical imaging*
- 2004 Colloquium staged by the MARC Program at Tennessee State University (Knoxville, TN): *The language of vision: pathways, maps and modules*
- 2005 Vision Sciences Society Convention: *Evolution of visual pathways* (Sarasota, FL) (Invited symposium talk; proceedings published in *Journal of Vision* 5(12) 32a)
- 2005 Fourth Asian Pacific International Congress of Anatomists (APICA) (Kusadasi, Turkey):

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- The language of vision: pathways, maps and modules* (also chaired one session)
- 2005 Colloquium staged by the Department of Physiological Optics at the University of Alabama-Birmingham: *Geniculostriate pathways*
- 2005 VSRC Visiting Scholars Program, University of Alabama-Birmingham: *Functional organization of primate visual cortex revealed by imaging of intrinsic signals*
- 2005 Summer Neuroscience Apprenticeship Program (SNAP), Vanderbilt University (Nashville, TN): *Neuroimaging: a window into the working brain* (invited talk)
- 2006 Optical Society of America (Tucson, AZ): *Evolution of visual pathways*
- 2006 Krasnow Institute at George Mason University (Fairfax, VA) *The geometry of feature maps in primate striate and extrastriate cortex: what optical imaging reveals about connections and function* (invited talk)
- 2006 Winter Conference on Brain Research (Steamboat Springs, CO): *The obsolete cortical module: setting boundaries on the problem* (invited panel speaker)
- 2006 Frontiers in Neuroimaging Program, University of Alabama (Birmingham AL): *A different slant on orientation bias and perception revealed by optical imaging of intrinsic signals* (invited panel speaker)
- 2006 Colloquium: The Vanderbilt Vision Research Center and Department of Ophthalmology & Visual Sciences, Vanderbilt University (Nashville, TN): *New perspectives on the evolution of the visual system*
- 2006 Colloquium: The Vanderbilt Vision Research Center and Department of Ophthalmology & Visual Sciences, Vanderbilt University (Nashville, TN): *New perspectives on the evolution of the visual system*
- 2006 Neuroscience Seminar: Department of Psychology, Vanderbilt University (Nashville, TN): *New perspectives on the evolution of the visual system*
- 2006 Seminar: Department of Cell & Developmental Biology, Vanderbilt Medical School (Nashville, TN) *The language of Vision, Pathways, Maps and Modules: How Does it All Work Together?*
- 2007 Seminar Class MARC PROGRAM: Physiology University of the Virgin Islands (St Thomas, United States, Virgin Islands) *How we see: links between brain mechanisms and perception.*
- 2007 Cell and Developmental Biology 2007 Seminar Series, Vanderbilt Medical School (Nashville, TN): *Seeing More Than the Light: Brain Maps, Modules and Perception*
- 2007 Mathematical Biosciences Institute at Ohio State University. Workshop in the visual system Ohio State University (Columbus OH): *The Evolution of Parallel Visual Pathway in Primates.*



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- 2007 Center for Integrative Neuroscience and Neuroengineering, University of Chicago, Chicago IL. 9/07 *The Evolution of Parallel Visual Pathways in Primates.*
- 2007 International Conference on Cognitive Neurodynamics (ICCN2007) 11/07 Shanghai China. Invited Symposium Speaker. *What language is spoken here? Conversations between neurons in primate visual cortex.*
- 2007 Tennessee State University invited speaker in Biological Sciences 11/07 *The language of vision: what code does the brain use to allow us to recognize a face.*
- 2008 Winter Conference on Brain Research (Snowbird, UT): All for One and One for All: Emerging Ideas about Population Coding in the Brain (invited speaker and workshop organizer)
- 2008 Barrow Neurological Institute, (Phoenix, AZ) Brain Maps, Modules, and Perception
- 2009 The Institute of Electrical and Electronics Engineers (IEEE) Symposium Series on Computational Intelligence panel on "Functional principles underlying biological intelligence" *Brain Modules and Perception.* Nashville, TN.
- 2009 Tufts Veterinary School, Grafton, MA: *Birds, Vision and Darwin: What do we have in common?*
- 2010 Vanderbilt University, Department of Psychology Neuroscience Seminar *Parallel Visual Pathways: Looking back.*
- 2010 Montreal University, Montreal Canada: *The role of feedback in shaping the visual message*
- 2010 Vanderbilt University, Department of Cell Biology Faculty Exchange *Linking Perception to Neurons: The role of cortical modules and feedback.*

**GRANT SUPPORT (currently active support in bold)**

- KO7-EY00061 Effects of Visual Deprivation in Primates. 1/1/77 - 1/1/80 (Academic Investigator Salary Award), \$90,000.
- EY01778-32** Visual System Organization and Development in Primates. 5/1/76 - 4/31/79, 7/1/78 - 6/30/84, 7/1/84 - 6/30/87, \$247,106. (Principal Investigator, 40% effort). 4/1/88 - 3/31/93, \$110,912 (1st year); \$587,179 (total); Principal Investigator 30% effort. 4/1/93-3/31/98, \$179,534 (1<sup>st</sup> year); 4/1/98-3/31/03, \$270,956; \$872,814 (total); Principal Investigator 35% effort. 4/1/03-3/31/08, \$216,667 (1<sup>st</sup> year); \$1,177,407 (total direct); **2/1/2009-1/31/2014, \$367,289 (2<sup>nd</sup> year)**; Principal Investigator 50% effort.

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**ARRA supplement-33S1 Direct Costs: \$85,075 2010**

EY02221 Ophthalmic Parameters in the Development of Myopia. 1/1/78 - 12/31/85, \$455,651. (Co-Principal Investigator, 5% effort).

K04-EY00223 Principles of Visual System Development (Research Career Program Award). 7/1/81 - 6/30/86, \$179,685.

EY03881 Anatomical Studies of Visual System Development. 6/1/81 - 11/30/83, \$192,544. (Co-Principal Investigator, 40% effort).

BNS-8216684 Stereoscopic Vision in Animals. 6/1/83 - 5/31/85. (Co-P.I. 10% effort; P.I. Robert Fox). \$40,279.

EY 05038 Mechanisms of Visual System Maturation. 12/1/83 - 11/30/86, (P.I. 40% effort). \$187,251, 3/1/87 - 2/28/91 (35% effort), \$438,389.

BRSR RRO524 Mechanisms of Visual System Maturation 8/01/83 - 11/30/83 (P.I.) \$7,000.

BNS-8708429 Early Development of Visual Pathways. 8/15/87 - 8/14/90, P.I. 20%, \$103,028.

URC Morphology of Retinal Terminals Arbors Projecting Ipsilaterally and Contralaterally in the Tree Shrew. 7/1/86 - 6/30/87, \$6,878.

URC Morphology of the Visual System: In vitro Development. 6/1/87 - 6/30/88, \$6,000.

BRSR RR0524-27 A new intracellular injection technique. 9/1/88 - 8/31/89, \$4,800 (P.I.).

EY-07007 Program faculty in NIH Training Grant at Vanderbilt: Visual Science Training Program. (3% effort)

EY07135 Training Grant in Vision Research 12/1/93 - 11/30/98 (total direct: 632,737), 12/1/96 - 11/30/97 \$147,832 direct (Faculty; P.I. M. Powers), 12/1/98 - 11/30/03 \$165,392

MH-15452 Program faculty in NIH Training Grant at Vanderbilt: Neurobiology Training Program. (3% effort)

P30HD 15052 -27 John F. Kennedy Center for Mental Retardation (Core Grant) 8/01/89 - 7/31/94, \$4,560,366, Investigator and Associate Director Biomedical Research (15% effort). 8/1/94 - 7/31/99 total direct costs \$2,724,466; HD15052-15 1994 - 1995 \$523,130 (faculty). 7/1/2002 - 6/30/03 total direct costs current year \$1,162,876 (faculty), 7/1/03-6/30/04 (faculty) \$871,728 ,

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7/1/04-6/30/09 (faculty) \$888,286, Total project is \$6,208,426.

BRSR RR0524 Geniculate Layer Development (P.I.), 9/1/91 - 8/31/92, \$6,000.

URC The Role of Glia in Optic Axon Guidance, 7/1/91 - 6/30/92, \$5,000.

P30 EY08126 Core Grant for Visual Research 4/1/89 - 3/31/94, \$1,121,967. (Module Director) 3% effort.; 4/1/89 - 3/31/99 (total direct: \$785,788), 4/1/96 - 3/31/97 \$155,767 direct (Faculty; P.I. J. Schall), 4/1/99 - 3/31/04, direct costs \$177,199; Total direct \$996,894, 4/1/04-3/31/09, current year 531,996, entire period, 2,000,000.

ONR Center for Medical and Materials Research with Free-Electron Lasers (Investigator 5% effort) Total \$13,392,610.

EY03778-17 Spatial Characteristics of Neurons in the Striate Cortex, 7/94 - 6/30/99 (CO-P.I. 10% effort; AB Bonds P.I.) total direct costs \$315,633: year 94 - 95 \$ 74,328; 7/1/99-6/30/03, \$ 5,869 (current year) total project is \$154,164

ONR Welding Procedure Development and Wound Healing in Ocular Tissues: 3/15/97 - 3/14/99 Project 1 (Investigator 20% effort) 3/15/97 - 3/14/98 direct \$54,873. 5/1/99 - 4/30/00, \$72,957

ONR Welding Procedure Development and Wound Healing in Ocular Tissues: 3/15/97-3/14/99 Project II (CO-Investigator 10% effort) 3/15/97-3/14/98 direct \$96,229. 5/1/99 - 4/30/00, \$92,714

T32 MH64913 - 07 "Training in Fundamental Neuroscience"  
Director: Elaine Sanders-Bush (Faculty)  
**Project Period: 7/1/06 – 6/30/11**  
**Current Year Direct: \$290,304, Project direct, \$1,496,153**  
This training grant supports institutional wide graduate training in molecular, integrative and cognitive neuroscience.

Hobbs Society The Role of Proteoglycans in Visual System Development 6/1/98 - 5/31/99, \$8,800.

Cell Biology Dept. Mammalian Visual System Development 6/1/98 - 5/31/00, \$10,000. Vanderbilt University

T32- MH 65215 Postdoctoral Training Program in Neurogenomics. [Faculty]  
Project period: 2002-2007; direct cost for year 06 (2004-2005) \$292,354. Dr. Randy Blakely PI.

2R01 EY03778-20A1 Spatial Characteristics of Cells in the Striate Cortex (A.B. Bonds) [Co-PI 15% effort] 04/01/03 - 03/31/08 NIH/NEI \$20,284

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IBN-0234646 Cognitive Control of Thalamic Activity [PI] 1/01/03 - 12/31/05  
20% effort \$172,784

NIH Representation of Visual Information in Striate Cortex. (A. B.  
Bonds PI) [Co-PI] 04/01/03 - 03/31/08 [co-PI] 5% effort NIH/NEI  
\$6,761

S10RR13947-01 Optical Imaging System 4/1/99-3/31/00. Principal Investigator  
\$169,538

ARRA supplement-33S1 Direct Costs: \$85,075 **4/1/10-2/28/11**

F31 NS44691-02 Cognitive Modulation of Thalamic Function. David Royal, predoc  
[mentor] Project period: 09-1-2002 - 08-31-2005, \$22,808 1<sup>st</sup>  
year, \$68,424 total.

1S10RR20066-01 High-Field MRI/MRS for Non-human Primates. Instrument Grant,  
Project period: 07-01-04 – to 6/30/06, direct total cost  
\$2,000,000. P. I.: Dr. Malcolm Avison.

T32 EY007135-15 “Training Grant in Vision Research”  
PI & Director: Jeffrey D. Schall  
Role: faculty  
Funding Dates: **12/1/09-11/30/14**

9T32NS061201-08 “Alliance for Research Training in Neuroscience”  
Director: Mark Wallace  
Role: faculty  
**Project Dates: 8/1/07 – 6/30/10**

R21 EY019132-01A1 “Multisensory Interactions in the Lateral Geniculate Nucleus”  
Principle Investigator: Vivien A. Casagrande  
Agency: National Eye Institute  
Type: R21  
1st Year Direct: \$125,000  
**Project Direct: \$250,000**  
**Period: April 1, 2009-March 31, 2011**

5 T32MH064913-09 “Training in Fundamental Neuroscience”  
Director: Mark Wallace  
Agency: NIH  
Type: Training Grant  
Project Dates: **7/1/06 – 6/30/11**  
Role: faculty

P50 MH078028 “Silvio O. Conte Center for Neuroscience Research Supplement”

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(Supplement)

Principle Investigator: Randy Blakely  
Agency: NIMH  
Type: NOT-OD-10-043  
Total Direct: \$621,206  
Period: 07/01/10-06/30/11 PENDING

### **SPONSORED STUDENTS**

Sherre (Florence) Phillips (1979 - 1985, graduate student) (Ph.D. 1985, Vanderbilt University), Research Associate Professor, Department of Psychology, Vanderbilt University.

Edward DeBruyn (1977 - 1983, Anatomy graduate student) (Ph.D. 1983, Vanderbilt University), currently Research Assistant Professor, Biomedical Engineering, Vanderbilt School of Engineering.

Jean Graham (1977 - 1979, postdoctoral fellow) (Ph.D. 1977, Washington University), currently Research Associate Professor, Department of Anatomy, University of Washington.

Eric Haseltine (1978 - 1979, postdoctoral fellow) (Ph.D. 1978, University of Indiana), currently Associate Director of National Intelligence for Science and Technology, Office of the Director of National Intelligence.

Judy Brunso-Bechtold (1979 - 1981, postdoctoral fellow; 1981-83, research assistant) (Ph.D. 1977, Florida State University), currently Professor, Department of Neurobiology & Anatomy, Wake Forest University School of Medicine.

Heywood Petry (1980 - 1982, postdoctoral fellow) (Ph.D. 1981, Brown University), currently Professor, Department of Psychological & Brain Sciences and Professor Ophthalmology & Visual, University of Louisville, Louisville, Kentucky.

Michael Sesma (1981 - 1983, postdoctoral fellow) (Ph.D. 1981, University of California-Riverside), Assistant Professor, School of Optometry, University of Missouri. 1983-1987; currently Chief, Research Scientist Development Program, Office for Special Populations, National Institute of Mental Health/National Institutes of Health, and Vice President of the Gaithersburg, Maryland City Council.

Michael Conley (1984 - 1985, postdoctoral fellow) (Ph.D. 1983, Duke University), currently Research Assistant Professor, Department of Psychology, Duke University.

George Condo (1984 - 1988, postdoctoral fellow) (Ph.D. 1984, University of California-Riverside). Research Assistant Professor, Department of Cell Biology, Vanderbilt University 1988-1990; currently Associate Professor, Bowdoin College.

Edward Lachica (1985 - 1990, graduate student, Ph.D., Psychology, 1990) NIH postdoctoral fellow with Dr. Edwin Rubel, University of Washington, Seattle, Washington; currently Director of Digital Imaging and Image Analysis, Meridian Instruments.

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James Hutchins (1985 - 1987, postdoctoral fellow) (Ph.D. 1985, Baylor College of Medicine), Research Assistant Professor, Department of Cell Biology, Vanderbilt Medical School 1987-1989; currently Professor of Health Sciences, Assistant Professor of Neurology (Research) and Ophthalmology, and Assistant Vice Chancellor for Faculty Development, University of Mississippi.

Alfonso Claps, M.D., Ph.D. (1989 - 1991, postdoctoral fellow) (Ph.D., 1988, Catholic University of Chile; M.D., 1982, University of Chile); currently Professor, Catholic University of Chile.

John Kelly Johnson, Ph.D. (1990 - 1993, postdoctoral fellow) (Ph.D. 1987, University of Kansas: NEI postdoctoral fellow, Syracuse University, Syracuse, N.Y., 1987-1990); currently Instructor, Division of Biological Sciences, University of Kansas.

John D. Allison, Ph.D. (1992 - 1996, postdoctoral fellow) (Ph.D. 1992, University of Texas, Austin, Texas); currently Research Assistant Professor, Department of Electrical Engineering, Vanderbilt University.

Yuchuan Ding, M.D., Ph.D. (1994 - 1998, postdoctoral fellow) (M.D., 1983, Beijing Medical College, Beijing China; Ph.D. 1994, Australian National University); currently Associate Professor, Department of Neurological Surgery Wayne State University School of Medicine

Jamie Boyd, Ph.D. (1995 - 1999, postdoctoral fellow) (Ph.D., 1995, Department of Ophthalmology, University of British Columbia, Vancouver, BC, Canada); currently Postdoctoral Fellow, Department of Biological Sciences, Simon Fraser University.

Amy (Wiencken) Wiencken-Barger (1995 - 2001, graduate student; Department of Cell Biology, Vanderbilt Medical School); currently research fellow in the Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill.

Jennifer Ichida (1996 - 2002, graduate student) Department of Psychology, Vanderbilt University; currently Research Assistant Professor, Department of Ophthalmology and Visual Science, Moran Eye Center, University of Utah.

Xiangmin Xu (1998 - 2004, graduate student) (Ph.D., 2004, Vanderbilt University), Department of Psychology, Vanderbilt University, currently Assistant Professor, Department of Anatomy & Neurobiology, University of California, Irvine.

Zhuang Song (1999 - 2001, graduate student), Department of Psychology, Vanderbilt University); currently postdoc, University of California, San Diego.

Yuri Shostak, Ph.D. (Ph.D., 1992, Institute of Radiobiology of the National Academy of Sciences of Belarus; Minsk, Belarus). (1999 - 2002, post-doctoral fellow) Department of Cell Biology, Vanderbilt University. Currently Director, Tiggroup.

Gyula Sáry, M.D. Ph.D. (M.D. 1985, Albert Szent-Gyorgyi Medical University; Szeged, Hungary, [now University of Szeged] Ph.D. 1996, currently Professor, University of Szeged). (2000 - 2002, post-doctoral fellow; summers 2003 – 2006, 2009, visiting

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scholar), Department of Cell Biology, Vanderbilt University. Currently Professor, Dept. Physiology, University of Szeged, Hungary.

David Royal (2000 - 2006, graduate student), Neuroscience Program: Molecular Neuroscience track, Vanderbilt Medical School, currently LTJG, Health Care Administrator, Medical Service Corps, United States Navy Reserves.

Maria Couppis (2003 - 2004, graduate student), Neuroscience Program, Vanderbilt Medical School. Currently postdoctoral fellow at the University of Colorado Health and Sciences Center.

Ilya Khaytin (2003 – 2008, graduate student), MSTP Program, Vanderbilt Medical School. Currently Vanderbilt Medical School, MSTP Program.

Fatih Yazar (MD, 1991, Gulhane Military Medical Academy; Ankara, Turkey) (2003 - 2004, visiting scholar) Department of Cell Biology, Vanderbilt University, currently Associate Professor, Gulhane Military Medical Academy, Ankara Turkey.

Octavio Ruiz (Ph.D., Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV)); Mexico City) (2004 – 2006, postdoctoral fellow) Department of Neuroscience, Vanderbilt University; currently Research Associate Professor in Neuroscience, Department of Biology and Medicine-Neuroscience, Brown University.

Xin Chen (Ph.D., Center for Brain Science Research, School of Life Science, Fudan University; Shanghai, PRC) (2004 – 2007, postdoctoral fellow), Department of Cell and Developmental Biology, Vanderbilt University. Currently Postdoc, UC Berkeley.

Walter John Jermakowicz (2005 – 2009, graduate student), MTSP Program, Vanderbilt Medical School. Currently Vanderbilt Medical School, MSTP Program.

Roan Marion (2006 - present, graduate student), Interdisciplinary Graduate Program, Vanderbilt Medical School

Gopathy Purushothaman (Ph.D., 1999, University of Houston) (2006 – present, postdoctoral fellow), Department of Cell and Developmental Biology, Vanderbilt University.

Keji Li (B.S., 2009, Fudan University) (2009-present) Department of Psychology, Vanderbilt University

Yaouguong Jiang (B.S., 2007, Peking University) (2009-present) Department of Psychology, Vanderbilt University

## **PUBLICATIONS**

Ware, C. B., V. A. Casagrande, and I. T. Diamond (1972) Does the acuity of the tree shrew suffer from removal of striate cortex? A commentary on the paper by Ward and Masterton. *Brain Behavior and Evolution* 5: 18-29.

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- Casagrande, V. A., J. K. Harting, W. C. Hall, I. T. Diamond, and G. F. Martin (1972) Superior colliculus of the tree shrew: A structural and functional subdivision into superficial and deep layers. *Science* 177:444-447.
- Casagrande, V. A., and I. T. Diamond (1974) Ablation study of the superior colliculus in the tree shrew (*Tupaia glis*). *Journal of Comparative Neurology* 156 (2):207-238.
- Ware, C. B., I. T. Diamond, and V. A. Casagrande (1974) Effects of ablating the striate cortex on a successive pattern discrimination: Further study of the visual system in the tree shrew (*Tupaia glis*). *Brain Behavior and Evolution* 9:264-279.
- Guillery, R. W., V. A. Casagrande, and M. D. Oberdorfer (1974) Congenitally abnormal vision in Siamese cats. *Nature*, 252:195-199.
- Casagrande, V. A. (1974) Dual function of the tectum in the tree shrew (*Tupaia glis*). In "Sensory-Motor Function of Midbrain Tectum." *NRP Bulletin*, 13(2):251-254.
- Sherman, S. M., T. T. Norton, and V. A. Casagrande (1975) X- and Y-cells in the dorsal lateral geniculate nucleus of the tree shrew (*Tupaia glis*). *Brain Research* 93:152-157.
- Casagrande, V. A. and J. K. Harting (1975) Transneuronal transport of tritiated fucose and proline in the visual pathways of the tree shrew (*Tupaia glis*). *Brain Research* 96(2):367-372.
- Guillery, R. W. and V. A. Casagrande (1976) Adaptive synaptic connections formed in the visual pathways in response to congenitally aberrant inputs. *Cold Spring Harbor Symposia on Quantitative Biology* 40:611-617.
- Raczkowski, D., V. A. Casagrande, and I. T. Diamond (1976) Visual neglect in the tree shrew after interruption of the descending projections of the deep superior colliculus. *Experiments in Neurology* 50:14-29.
- Kaas, J.H., C. Lin, and V. A. Casagrande (1976) The relay of ipsilateral and contralateral retinal input from the lateral geniculate nucleus to striate cortex in the owl monkey: a transneuronal transport study. *Brain Research* 106: 371-378.
- Weber, J. T., V. A. Casagrande, and J. K. Harting (1977) Transneuronal transport of <sup>3</sup>H proline with the visual system of the grey squirrel. *Brain Research* 129: 346-352.
- Sherman, S. M., T. T. Norton, and V. A. Casagrande (1977) Myopia in lid-sutured tree shrew (*Tupaia glis*). *Brain Research* 124:154-157.
- Guillery, R. W., and V. A. Casagrande (1977) Studies of the modifiability of the visual pathways in Midwestern Siamese cats. *Journal of Comparative Neurology* 174:15-46.
- Norton, T. T., V. A. Casagrande, and S. M. Sherman (1977) Loss of Y-cells in the lateral geniculate nucleus of monocularly deprived tree shrews. *Science* 197:784-786.
- Casagrande, V. A., R. W. Guillery, and J. K. Harting (1978) Differential effects of monocular deprivation seen in different layers of the lateral geniculate nucleus. *Journal of*



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*Comparative Neurology* 179: 469-486.

Harting, J. K., V. A. Casagrande, and J. T. Weber (1978) The projection of the primate superior colliculus upon the dorsal lateral geniculate nucleus: autoradiographic demonstration of interlaminar distribution of tectogeniculate axons. *Brain Research* 150: 593-599.

McKanna, J. A. and V. A. Casagrande (1978) Reduced lens development in lid-suture myopia. *Experiments in Eye Research* 26:715-723.

Haseltine, E. C.,\* E. J. DeBruyn,\* and V. A. Casagrande (1979) Demonstration of ocular dominance columns in Nissl-stained sections of monkey visual cortex following enucleation. *Brain Research* 176:153-158.

McKanna, J. A. and V. A. Casagrande (1980) Zonular dysplasia in myopia. Proceedings of the Second International Conference on Myopia, Yokohama, Japan, p. 21-32.

Graham, J.\* and V. A. Casagrande (1980) A light microscopic and electron microscopic study of the superficial layers of the superior colliculus of the tree shrew (*Tupaia glis*). *Journal of Comparative Neurology* 191:133-151.

DeBruyn,\* E. J., V.L. Wise,\* and V. A. Casagrande (1980) The size and topographic arrangement of retinal ganglion cells in the galago. *Vision Research* 20:315-327.

Joseph, R.\* and V. A. Casagrande (1980) Visual deficits and recovery following monocular lid closure in a prosimian primate. *Behavioral Brain Research* 1:165-186.

Casagrande, V. A. and R. Joseph\* (1980) Morphological effects of monocular deprivation and recovery on the dorsal lateral geniculate nucleus in Galago. *Journal of Comparative Neurology* 194:413-427.

DeBruyn, E. J.\* and V. A. Casagrande (1981) Demonstration of ocular dominance columns in a New World primate by means of monocular deprivation. *Brain Research* 207:453-458.

Brunso-Bechtold, J. K.\* and V. A. Casagrande (1981) Effect of bilateral enucleation on the development of layers in the dorsal lateral geniculate nucleus. *Neuroscience*, 12:2579-2586.

McKanna, J. A. and V. A. Casagrande (1981) Atropine affects lid-suture myopia development Experimental studies of chronic atropinization in tree shrews. *Doc. Opthal. Proc. Series* 28:187-192.

Norton, T. T. and V. A. Casagrande (1982) Laminar organization of receptive-field properties in the lateral geniculate nucleus of bush baby (*Galago crassicaudatus*). *Journal of Neurophysiology* 47 (4): 715-741.

Brunso-Bechtold, J. K.\* and V. A. Casagrande (1982) Early postnatal development of laminar characteristics in the dorsal lateral geniculate nucleus of the tree shrew. *Journal of Neuroscience* 2:589-597.

Florence, S. L.,\* M. A. Sesma,\* and V. A. Casagrande (1983) Morphology of geniculo-striate

*Curriculum Vitae*  
Vivien A. Casagrande  
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- afferents in a prosimian primate. *Brain Research* 270: 127-130.
- Brunso-Bechtold, J. K.,\* S. L. Florence, and V. A. Casagrande (1983) The role of retinogeniculate afferents in the development of connections between visual cortex and the dorsal lateral geniculate nucleus. *Developmental Brain Research* 10: 33-39.
- Sesma, M. A.,\* G. E. Irvin, T. K. Kuyk, T. T. Norton, and V. A. Casagrande (1984) Effects of monocular deprivation on the lateral geniculate nucleus in a primate. *Proceedings of the National Academy of Sciences* 81: 2255-2259.
- Petry, H.M.,\* R. Fox, and V. A. Casagrande (1984) Spatial contrast sensitivity of the tree shrew. *Vision Research* 24: 1037-1042.
- Sesma,\* M.A., V. A. Casagrande, and J.H. Kaas (1984) Cortical connections of area 17 in tree shrews. *Journal of Comparative Neurology*, 230: 337-351.
- Holscher, M.A., D.L. Sly, J.B. Cousar, A.D. Glick and V. A. Casagrande (1984) Monocytic leukemia in a greater bushbaby (*Galago crassicaudatus argentatus*). *Laboratory Animal Sci.*, 34(6): 619-620.
- Brunso-Bechtold, J. K.\* and V. A. Casagrande (1985) Presence of retinogeniculate fibers is essential for initiating the formation of each interlaminar space in the lateral geniculate nucleus. *Developmental Brain Research* 20: 123-126.
- Conley, M.,\* E. A. Lachica,\* and V. A. Casagrande (1985) Demonstration of ipsilateral retinocollicular projections in tree shrew (*Tupaia glis*). *Brain Research* 346: 181-185.
- Conley, M.,\* E. Birecree,\* and V. A. Casagrande (1985) Neuronal classes and their relation to functional and laminar organization of the lateral geniculate nucleus: A Golgi study of the prosimian primate (*Galago crassicaudatus*). *Journal of Comparative Neurology* 242: 561-583.
- Brunso-Bechtold, J. K.\* and V. A. Casagrande (1985) Ultrastructure of the developing tree shrew lateral geniculate nucleus. *Developmental Brain Research* 23: 310-314.
- Irvin, G. E., T. T. Norton, M. A. Sesma,\* V. A. Casagrande (1986) W-Like response properties of interlaminar zone cells in the lateral geniculate nucleus of a primate (*Galago crassicaudatus*). *Brain Research* 362: 254-270.
- Florence,\* S. L., M. Conley,\* and V. A. Casagrande (1986) Ocular dominance columns and retinal projections in the New World spider monkey (*Ateles ater*). *Journal of Comparative Neurology* 243: 234-248.
- Florence, S.\* and V. A. Casagrande (1986) Changes in the distribution of geniculo-cortical projections following monocular deprivation in tree shrews. *Brain Research*, 374: 179-184.
- Langston,\* A. L., V. A. Casagrande, and R. Fox (1986) Spatial resolution in the Galago. *Vision Research* 26: 791-796.

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Vivien A. Casagrande  
11/08/11

- Casagrande, V. A. (1987) The Areciprocal loop@ model: how strong is the evidence, how useful is the model? *Behavioral and Brain Sciences* 10(1):121.
- Bonds, A. B., V. A. Casagrande, T. T. Norton, and E. J. DeBruyn\* (1987) Visual resolution and sensitivity in a nocturnal primate (Galago) measured with visual evoked potentials. *Vision Research* 27(6):845-857.
- Lachica,\* E. A., G. J. Condo,\* and V. A. Casagrande (1987) Development of cytochrome oxidase staining in the retina and lateral geniculate nucleus: A possible correlate of ON- and OFF-center channel maturation. *Developmental Brain Research* 34:298-302.
- Florence,\* S. L. and V. A. Casagrande (1987) The organization of individual afferent axons in layer IV of striate cortex in a primate. *Journal of Neuroscience* 7:3850-3868.
- Condo,\* G. J., S. A. Marvin, and V. A. Casagrande (1987) Postnatal development of geniculocortical projections in the tree shrew. *Developmental Brain Research* 35:148-152.
- Casagrande, V. A. and G.J. Condo\* (1988) The effect of altered neuronal activity on the development of layers in the lateral geniculate nucleus (LGN). *Journal of Neuroscience* 8:395-416.
- Casagrande, V. A. and G. J. Condo\* (1988) Is binocular competition essential for layer formation in the lateral geniculate nucleus? *Brain Behavior and Evolution* 31(4):198-208.
- Norton, T.T., G. E. Irvin, V. A. Casagrande, M. A. Sesma,\* and H. M. Petry\* (1988) Contrast sensitivity functions of W-, X-, and Y-like relay cells in the lateral geniculate nucleus of the Bush baby (*Galago crassicaudatus*). *Journal of Neurophysiology* 59:1639-1656.
- Hutchins,\* J. B. and V. A. Casagrande (1988) Development of acetylcholinesterase activity in the lateral geniculate nucleus. *Journal of Comparative Neurology* 275:241-253.
- Lachica,\* E. A. and V. A. Casagrande (1988) Development of primate retinogeniculate axon arbors. *Visual Neuroscience* 1:103-123.
- Hutchins,\* J. B. and V. A. Casagrande (1988) Glial cells develop a laminar pattern before neuronal cells in the lateral geniculate nucleus. *Proceedings for the National Academy of Sciences* 85:8316-8320.
- Hutchins,\* J.B. and V. A. Casagrande (1989) Vimentin: Changes in distribution during brain development. *Glia* 2:55-66.
- Lachica,\* E. A., M. W. Crooks\* and V. A. Casagrande (1990) Effects of monocular deprivation on the morphology of retinogeniculate axon arbors in a primate. *Journal of Comparative Neurology* 296:303-323.
- Condo,\* G. J. and V. A. Casagrande (1990) Organization of cytochrome oxidase staining in the visual cortex of nocturnal primates (*Galago crassicaudatus* and *Galago senegalensis*): I. Adult patterns. *Journal of Comparative Neurology* 293(4):632-645.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Hutchins,\* J. B. and V. A. Casagrande (1990) Development of the lateral geniculate nucleus: interactions between retinal afferent, cytoarchitectonic and glial cell process laminations in ferrets and tree shrews. *Journal of Comparative Neurology* 298:113-128.
- Florence,\* S. L. and V. A. Casagrande (1990) Development of geniculocortical axon arbors in a primate. *Visual Neuroscience* 5(3):291-311.
- Claps,\* A. and V. A. Casagrande (1990) The distribution and morphology of corticogeniculate axons in ferrets. *Brain Research* 530:126-129.
- Lachica,\* E. A.,\* J. A. Mavity-Hudson,\* and V. A. Casagrande (1991) Morphological details of primate axons and dendrites revealed by extracellular injection of biocytin: an economic and reliable alternative to PHA-L. *Brain Research* 564:1-11.
- Lachica,\* E. A., P. D. Beck\* and V. A. Casagrande (1992) Parallel pathways in macaque monkey striate cortex: anatomically defined columns in layer III. *Proceedings for the National Academy of Sciences* 89:3566-3570.
- Lachica,\* E. A. and V. A. Casagrande (1992) Direct W-like geniculate projections to the cytochrome oxidase (CO) blobs in primate visual cortex: axon morphology. *Journal of Comparative Neurology* 319:141-159.
- Johnson,\* J. K. and V. A. Casagrande (1993) Prenatal development of axon outgrowth and connectivity in the ferret visual system. *Visual Neuroscience* 10:117-130.
- Lachica,\* E. A. and V. A. Casagrande (1993) The morphology of collicular and retinal axons ending on small relay (W-like) cells of the primate lateral geniculate nucleus. *Visual Neuroscience* 10:403-419.
- Irvin,\* G. E., V. A. Casagrande, and T. T. Norton (1993) Center/surround relationships of magnocellular, parvocellular and koniocellular relay cells in primate lateral geniculate nucleus. *Visual Neuroscience* 10:363-373.
- Lachica,\* E. A., P. D. Beck,\* and V. A. Casagrande (1993) Intrinsic connections of layer III of striate cortex in squirrel monkey and bush baby: correlations with patterns of cytochrome oxidase. *Journal of Comparative Neurology* 329:163-187.
- DeBruyn,\* E.J., V. A. Casagrande, P.D. Beck\* and A. B. Bonds (1993) Visual Resolution and sensitivity of single cells in primary visual cortex (V1) of a nocturnal primate (bush baby): correlations with cortical layers and cytochrome oxidase patterns. *Journal of Neurophysiology* 69:3-18.
- Allison,\* J. D., V. A. Casagrande, E.J. DeBruyn,\* and A. B. Bonds (1993) Contrast adaptation in striate cortical neurons of the nocturnal primate bush baby (*Galago crassicaudatus*). *Visual Neuroscience* 10:1129-1139.
- Casagrande, V. A. (1994) A third visual pathway to primate V1. *Trends in Neurosciences* 17:305-310.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Johnson,\* J. K. and V. A. Casagrande (1995) Distribution of calcium-binding proteins within the parallel visual pathways of a primate (*Galago crassicaudatus*). *Journal of Comparative Neurology* 356:238-260.
- Allison,\* J. D., V. A. Casagrande, and A. B. Bonds (1995) The influence of input from the lower cortical layers on the orientation tuning of upper layer V1 cells in a primate. *Visual Neuroscience* 12:309-320.
- Allison,\* J. D., J. F. Kabara, R. K. Snider, V. A. Casagrande, and A. B. Bonds (1996) GABAB-receptor-mediated inhibition reduces the orientation selectivity of the sustained response of striate cortical neurons in cats. *Visual Neuroscience* 13: 559-566.
- Singleton,\* C. D. and V. A. Casagrande (1996) A reliable and sensitive method for fluorescent photoconversion. *Journal of Neuroscience Methods* 64:47-54.
- Casagrande, V. A. and J. D. Boyd\* (1996) The neural architecture of binocular vision. *Eye* 10: 153-160.
- Ding,\* Y. and V. A. Casagrande (1997) The distribution and morphology of LGN K pathway axons within the layers and CO-blobs of owl monkey V1. *Visual Neuroscience* 14:691-704.
- Rosa, M. G. P., V. A. Casagrande, T. Preuss, and J. H. Kaas (1997) Visual field representation in striate and prestriate cortices of a prosimian primate (*Galago garnettii*). *Journal of Neurophysiology* 77: 3193-3217.
- Ding,\* Y. and V. A. Casagrande (1998) Synaptic and neurochemical characterization of parallel pathways to the cytochrome oxidase blobs of primate visual cortex. *Journal of Comparative Neurology* 391: 429-443.
- Yamada, E. S., D. W. Marshak, L. Carlos, L. Silveira, and V. A. Casagrande (1998) Morphology of P and M retinal ganglion cells of the bush baby. *Vision Research* 38: 3345-3352.
- Casagrande, V. A. (1998) Krieg Cortical Kudos. *Cerebral Cortex* 8:477-479.
- Wiencken,\* A. E. and V. A. Casagrande (1999) Endothelial nitric oxide synthetase (eNOS) in astrocytes: another source of nitric oxide in neocortex. *Glia* 26:280-290.
- Boyd,\* J. D. and V. A. Casagrande (1999) Relationships between cytochrome oxidase (CO) blobs in primate V1 and the distribution of neurons projecting to the middle temporal area (MT). *Journal of Comparative Neurology* 409:573-591
- Shen, J. H., V. A. Casagrande, K.M. Joos, D. J. Shetlar, R. D. Robinson, W. S. Head, J. A. Mavity-Hudson, and A.H. Nunnally (1999) Acute optic nerve sheath fenestration with the free electron laser. SPIE Conference on Ophthalmic Technologies, IX, San Jose, CA.
- Allison,\* J. D., P. Melzer,\* Y. Ding,\* A. B. Bonds, and V. A. Casagrande (2000) Differential contributions of magnocellular and parvocellular pathways to the contrast response of neurons in bush baby primary visual cortex (V1). *Visual Neuroscience* 17:71-77.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

Wiencken,\* A. E. and V. A. Casagrande (2000) The distribution of NADPH diaphorase and nitric oxide synthetase (NOS) in relation to the functional compartments of areas V1 and V2 of primate visual cortex. *Cerebral Cortex* 10:499-511.

Ichida,\* J. M., M. G. P. Rosa and V. A. Casagrande (2000) Does the visual system of the flying fox resemble that of primates? The distribution of calcium-binding proteins in the primary visual pathway of *Pteropus poliocephalus*. *Journal of Comparative Neurology* 417:73-87.

Boyd,\* J. D., J. A. Mavity-Hudson, and V. A. Casagrande (2000) The connections of layer 4 subdivisions of the primary visual cortex (V1) of the owl monkey. *Cerebral Cortex* 10:644-662.

Joos, K.M., J.H. Shen, D. J. Shetlar, and V. A. Casagrande (2000) Optic nerve fenestration with a novel wavelength produced by the free electron laser (FEL). *Lasers in Surgery and Medicine* 27:191-205.

Xu,\* X., J. M. Ichida,\* J. D. Allison,\* J. D. Boyd,\* A. B. Bonds and V. A. Casagrande (2001) A comparison of koniocellular, magnocellular and parvocellular receptive field properties in the lateral geniculate nucleus of the owl monkey (*Aotus trivirgatus*). *The Journal of Physiology* 531.1: 203-218, PMID: 11179404.

Xu,\* X., J. M. Ichida,\* Y. Shostak,\* A. B. Bonds, and V. A. Casagrande (2002) Are primate lateral geniculate nucleus (LGN) cells really sensitive to orientation or direction? *Visual Neuroscience* 19: 97-108, PMID: 12180863.

Shostak,\* Y., Y. Ding,\* J. A. Mavity-Hudson, and V. A. Casagrande (2002) Cortical synaptic arrangements of the third visual pathway in three primate species: *Macaca mulatta*, *Saimiri sciureus*, and *Aotus trivirgatus*. *Journal of Neuroscience* 22:2885-2893, PMID: 11923453.

Ichida\*, J. M. and V. A. Casagrande (2002) Organization of the feedback pathway from striate cortex (V1) to the lateral geniculate nucleus (LGN) in a simian primate (*Aotus trivirgatus*). *Journal of Comparative Neurology*. 454:272-283, PMID: 12442318.

Xu,\* X., A. B. Bonds and V. A. Casagrande (2002) Modeling receptive-field structure of koniocellular, magnocellular, and parvocellular LGN cells in the owl monkey (*Aotus trivirgatus*). *Visual Neuroscience* 19: 703-711, PMID: 12688666.

Lyon, D. C., X. Xu\*, V. A., Casagrande, J. D. Stefansic, D. Shima and J. H. Kaas (2002) Optical imaging reveals retinotopic organization of dorsal V3 in New World owl monkeys. *Proceedings for the National Academy of Sciences* 99 (24):15735-15742 PMID: 12441399.

Shostak,\* Y., Y. Ding,\* and V. A. Casagrande (2003) Neurochemical comparison of synaptic arrangements of parvocellular, magnocellular, and koniocellular geniculate pathways in owl monkey (*Aotus trivirgatus*) visual cortex. *Journal of Comparative Neurology* 456: 12-28, PMID: 12508310.

Joos, K., L. Mawn, J. Shen, V. A. Casagrande (2003) Chronic and acute analysis of optic nerve

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

sheath fenestration with the free electron laser in monkeys. *Lasers in Surgery and Medicine* 32:32-41, PMID: 12516068.

Xu\*, X., W. Bosking, G. Sáry\*, J. Stefansic, D. Shima, and V. Casagrande (2004). Functional organization of visual cortex in the owl monkey. *Journal of Neuroscience* (cover figure), 24(28):6237– 6247, PMID: 15254078.

Wiencken-Barger,\* A. E., J. Mavity-Hudson, M. Kutsche, M. Schachner, and V. A. Casagrande (2004). The role of L1 in axon pathfinding and fasciculation. *Cerebral Cortex* (cover figure) 14:121-113, PMID: 14704209.

Xu\*, X., C.E. Collins, P.M. Kaskan, I. Khaytin\*, J.H. Kaas, and V.A. Casagrande (2004). Optical imaging of visually evoked responses in prosimian primates reveals conserved features of the middle temporal visual area. *Proceedings for the National Academy of Sciences* 101(8): 2566-71, PMID: 14983049.

Collins, C. E., X. Xu\*, I. Khaytin\*, P. M. Kaskan, V. A. Casagrande, and J. H. Kaas (2005) Optical imaging of visually evoked responses in the middle temporal area after deactivation of primary visual cortex in adult primates. *Proceedings for the National Academy of Sciences* 102(15): 5594-5559, PMID: 15809438.

Elston, E., A. Elston, V. Casagrande, and J. H. Kaas (2005) Areal specialization of pyramidal cell structure in the visual cortex of the tree shrew (*Tupaia belangeri*): a new task revealed in the evolution of cortical circuitry. *Experimental Brain Research* 163:13-20, PMID: 15660232.

Elston, E., A. Elston, V. Casagrande, and J. H. Kaas (2005) Pyramidal neurons of granular prefrontal cortex of the galago: Complexity in the evolution of the psychic cell. *Anatomical Record Part A* 285A:610–618 PMID: 15912521.

Elston, E., A. Elston, V. Casagrande, and J. H. Kaas (2005) Regional specialization of pyramidal cell structure in the cerebral cortex of the bush baby (*Otolemur garnetti*). *Brain, Behavior, and Evolution* 66:10-20 PMID: 15821345.

Xu\*, X., Bosking W. H., White, L. E., Fitzpatrick, D., & Casagrande, V.A. (2005) Functional organization of visual cortex in the prosimian bush baby revealed by optical imaging of intrinsic signals. *Journal of Neurophysiology*, 94:2748–2762 PMID: 16000523.

Royal\*, D. W., Gy. Sáry\*, J.D. Schall, and V.A. Casagrande (2006) Correlates of motor planning and fixation in in the macaque monkey lateral geniculate nucleus (LGN). *Experimental Brain Research* 168:62-75 PMID: 16151777.

Elston, G.N., R. Benavides-Piccione, A. Elston, B. Zietsch, J. DeFelipe, P. Manger, V. Casagrande and J. Kaas (2006) Specializations of the granular prefrontal cortex of primates: implications for cognitive processing. *Anatomical Record Part A* 288A:26-35 PMID: 16342214.

Ruiz\*, O., D. Royal\*, G. Sáry\*, X. Chen\*, J. D. Schall, and V. A. Casagrande (2006) Low-threshold Ca<sup>2+</sup> associated bursts are rare events in the LGN of the awake behaving monkey. *Journal of Neurophysiology* 95:3401-3413 PMID: 16510773.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Xu\*, X., Collins C.E., Khaytin\*, I., Kaas J. H., and V. A. Casagrande (2006). Unequal representation of cardinal versus oblique orientations in the middle temporal (MT) visual area. *Proceedings for the National Academy of Sciences* 103(46):17490-95, PMID: 17088527.
- Xu\*, X., Anderson\*, T.J., Casagrande, V.A. (2007) How do functional maps in primary visual cortex vary with eccentricity? *Journal of Comparative Neurology* 501: 741-755 PMID: 17299757.
- Casagrande, V.A., F. Yazar\*, K.D. Jones\*, and Y. Ding\* (2007) The morphology of the koniocellular (K) axon pathway in the macaque monkey. *Cerebral Cortex* 17: 2334-2345 PMID: 17215477.
- Casagrande, V.A., X. Chen\* and W. J. Jermakowicz\* (2007) What language is spoken here? Conversations between neurons in primate visual cortex. *Advances in Cognitive Neurodynamics (Proceedings of the 1st International Conference on Cognitive Neurodynamics (ICCN-07)) and 3rd International conference on Physiological Biophysics – Cognitive Neurodynamics (ICCN2007 proceedings)*.
- Khaytin\*, I., X. Chen\*, D.W. Royal\*, O. Ruiz\*, W.J. Jermakowicz\*, R.M. Siegel and Vivien A. Casagrande, (2008) Functional organization of temporal frequency selectivity in primate visual cortex. *Cerebral Cortex* 18: 1828-1842, PMID: PMC2790394
- Purushothaman, G. \*, I. Khaytin\*, and V.A. Casagrande (2009) Quantification of optical images of cortical responses for inferring functional maps. *J. Neurophysiol.*, 101, 2708-24, PMID: PMC2681427.
- Jermakowicz, W.J.\* , X. Chen\*, I. Khaytin\*, A.B. Bonds and V.A. Casagrande (2009) Relationship between spontaneous and evoked spike-time correlations in primate visual cortex. *J. Neurophysiol.*, 101, 2279-89, PMID: PMC2681437.
- Casagrande, V.A. (2011) In Memoriam Edward George Jones (1939-2011). *American Association of Anatomist News*, 20 (3), 9.
- Purushothaman, G. \*, I. Khaytin\*, and V.A. Casagrande (2011) Columnar organization of primary visual cortex for fine discrimination. *Nature Neuroscience Submitted*.
- Ichida, J.M., Shostak, Y., Casagrande, V.A. (2012) Distinct patterns of corticogeniculate feedback to different layers of the lateral geniculate nucleus (LGN). *Journal of Neuroscience Submitted*.
- Purushothaman, G., Marion, R., Li, K., and V. A. Casagrande (2012) Gating and control of cortical information by visual thalamus. *Nature Neuroscience Submitted*.
- Wiencken-Barger\*, A. E., J. Mavity-Hudson\*, H. G. Tomasiewicz, U. Rutishauser, and V. A. Casagrande (2011). The role of polysialic acid and neural cell adhesion molecule during axon fasciculation and pathfinding between the thalamus and cortex. *In preparation*.
- Shostak\*, Y. and Casagrande, V.A. (2011) Metabotropic glutamate receptor 5 (mGluR5) shows



*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

different patterns of localization within the parallel visual pathways in two primate species: *Macaca mulatta* and *Saimiri sciureus*. *In preparation*.

## **CHAPTERS & BOOKS**

Casagrande, V. A. and E. J. DeBruyn\* (1982) The Galago visual system: aspects of normal organization and developmental plasticity, in *The Lesser Bushbaby (Galago): An Animal Model: Selected Topics* (D. E. Haines, ed.), Boca Raton, FL: CRC Press, pp. 138-162.

Brunso-Bechtold,\* J. K. and V. A. Casagrande (1984) Development of layers in the dorsal lateral geniculate nucleus in tree shrew. In *Contributions to Sensory Physiology, vol. 8* (W. D. Neff, ed.), New York, Academic, pp. 41-77.

McKanna, J. A. and V. A. Casagrande (1985) Computerized radioautographic grain counting. In *The Microcomputer in Cell and Neurobiology Research* (R. Mize, ed.) New York: Elsevier, pp. 355-373.

Casagrande, V. A. and J. K. Brunso-Bechtold\* (1985) Development of lamination in the lateral geniculate nucleus: critical factors. In *Advances in Neurological and Behavioral Development, Vol. 1* (R. N. Aslin, ed). Norwood, NJ: Ablex, pp. 33-69.

Casagrande, V. A. and J. B. Hutchins\* (1990) Methods for analyzing neuronal connections in mammals. In *Methods in Neurosciences, Vol. 3* (M. Conn, ed), Orlando, FL: Academic, pp. 188-207.

Lachica, E. A.\* and V. A. Casagrande (1990) Methods for visualizing and analyzing individual axon arbors. In *Methods in Neurosciences, Vol. 3* (M. Conn, ed), Orlando, FL: Academic, pp. 230-244.

Casagrande, V. A. and T. T. Norton (1991) The lateral geniculate nucleus: A review of its physiology and function. In *The Neural Basis of Visual Function* (A.G. Leventhal,ed.), vol. 4, *Vision and Visual Dysfunction* (J.R. Cronley-Dillon, ed), London: MacMillan, pp. 41-84.

Casagrande, V. A. and J. H. Kaas (1994) The afferent, intrinsic, and efferent connections of primary visual cortex in primates. In *Primary Visual Cortex of Primates, vol. 10, Cerebral Cortex* (A. Peters and K. Rockland, eds.), New York: Plenum, pp. 201-259.

Casagrande, V. A., and P. G. Shinkman, eds. (1994) *Advances in Neural and Behavioral Development, vol. 4*. Norwood, NJ: Ablex.

Casagrande, V. A. and A. E. Wiencken\* (1996) Prenatal development of axon outgrowth and connectivity. In *Neural Development and Plasticity, vol. 108, Progress in Brain Research* (R. R. Mize and R. S. Erzurumlu, eds.) New York: Elsevier, pp. 83-93.

Casagrande, V. A. (1998) Review of *The First Steps in Seeing* by Robert W. Rodieck, Sinauer Associates. *Trends in Neurosciences* 22: 327-328.

Casagrande, V. A. (1999) The mystery of the visual system K pathway. In *Journal of Physiology, Perspectives*, 517.3, p. 630.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Casagrande, V. A. and A. E. Wiencken-Barger\* (2000) Developmental plasticity in the mammalian visual system. In *The Mutable Brain: Dynamic and Plastic Features of the Developing and Mature Brain* (J. H. Kaas ed.) Amsterdam: Harwood, pp 1-48.
- Casagrande, V. A., X. Xu\*, and Gy. Sáry\* (2002) Static and dynamic views of visual cortical organization. In *Changing Views of Cajal's Neuron*, vol.136, *Progress in Brain Research* (P. Rakic, E. Azmitia, J. deFelipe, C. Ribak and E. Jones, eds.), New York: Elsevier, pp. 389-408, PMID: 12143396.
- Wiencken-Barger,\* A.E. and V. A. Casagrande (2002) Visual system development and neural activity. In *Encyclopedia of the Human Brain* (V. S. Ramachandran, ed.) San Diego: Academic, pp. 791-804.
- Casagrande, V. A. and J.M. Ichida\* (2002) The lateral geniculate nucleus. In *Physiology of the Eye, Clinical Applications, 10<sup>th</sup> Edition* (P.L. Kauffman and A. Alm, eds.), St. Louis, MO: C.V. Mosby, pp. 655-668.
- Casagrande, V. A. and J.M. Ichida\* (2002) The primary visual cortex. In *Physiology of the Eye, Clinical Applications, 10<sup>th</sup> Edition* (P.L. Kauffman and A. Alm, eds.), St. Louis, MO: C.V. Mosby, pp. 669-685.
- Casagrande, V.A. and D. Royal\* (2003) Parallel visual pathways in a dynamic system. In *Primate Vision* (J. H. Kaas and C. E. Collins, eds.) Boca Raton, FL: CRC Press, pp. 1-28.
- Casagrande, V.A. and X. Xu\* (2004) Parallel visual pathways: a comparative perspective. In *The Visual Neurosciences* (L. Chalupa and John S. Werner, eds.) Cambridge, MA: MIT Press, pp. 494-506.
- Casagrande, V.A., Royal\*, D.W., Sáry\*, Gy. (2005) Extraretinal inputs and feedback mechanisms to the lateral geniculate nucleus (LGN). In *The Primate Visual System: A Comparative Approach* (Jan Kremers, ed.) Hoboken, New Jersey: John Wiley and Sons, pp. 191-206.
- Casagrande, V. A., Gy. Sáry\*, D. Royal\*, and O. Ruiz\* (2005) On the impact of attention and motor planning on the lateral geniculate nucleus. In *Progress in Brain Research* vol. 149: *Cortical Function: A View from the Thalamus*. (V. A. Casagrande, S. M. Sherman and R. W. Guillery, eds), Amsterdam: Elsevier, pp. 11-29 PMID: 16226573.
- Casagrande, V.A., R. Guillery, and S. Sherman, eds. (2005) Cortical function: a view from the thalamus (book). In *Progress in Brain Research* vol. 149, Amsterdam: Elsevier, pp 11-31.
- Casagrande, V.A., I. Khaytin\*, I., and J. Boyd\* (2007) The evolution of parallel visual pathways in the brains of primates. In *Evolution of the Nervous System* (T.M. Preuss and J. Kaas, eds.), Vol. 4, pp. 87-108.
- Jermakowicz\*, W.J. and Casagrande, V.A. (2007) Neuronal networks a century after Cajal. In *Brain Research Reviews* vol. 55: A Century of Neuroscience Discovery: Reflecting on the 1906 Nobel Prizes to Golgi and Cajal. In *Brain Research Reviews* (L. Swanson, ed.),

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

Amsterdam: Elsevier, pp. 264-284 PMID: 18056699.

Casagrande, V.A., X. Chen\* and W. J. Jermakowicz\* (2007) What language is spoken here? Conversations between neurons in primate visual cortex. In *Advances in Cognitive Neurodynamics* (Wang, R., Gu, F., Shen, E. eds), Springer, pp. 27-30.

Casagrande, V.A., I. Khaytin\*, and J. Boyd\* (2008) Evolution of the Visual System: Mammals—Color Vision and the Function of Parallel Visual Pathways in Primates. In *Encyclopedia of Neuroscience* (Marc D., Hirokawa, Nobutaka, and Windhorst, U eds –Field editor A. Butler), Springer Berlin Heidelberg, pp. 1472-1475.

Boyd\*, J.D., I. Khaytin\*, and V. A. Casagrande (2008) Comparative Evolutionary Aspects across Orders. In *Encyclopedia of Neuroscience* (M. D. Binder, N. Hirokawa, and U. Windhorst eds –Field editor A. Butler), Springer Berlin Heidelberg, pp. 1448-1455.

Casagrande, V.A. and G. Purushothaman\*, (2009) Modularity. In *Encyclopedia of Perception* (E. Bruce Goldstein, ed). Thousand Oaks, CA: Sage Publications, pp 561-566.

Casagrande, V.A. and R.T. Marion\*, (2011) Processing in the Primary Visual Cortex. In *Adler's Physiology of the Eye*, 11th edition (A. Alm, P.L. Kaufman, (lead) L.A. Levin, S.F.E. Nilsson, J. Ver Hoeve and S.M. Wu, eds) Mosby, Elsevier, pp 586-598.

Casagrande, V.A. and J.M. Ichida\* (2011) Processing in the Lateral Geniculate Nucleus (LGN) In *Adler's Physiology of the Eye*, 11<sup>th</sup> edition (A. Alm, P.L. Kaufman, (lead) L.A. Levin, S.F.E. Nilsson, J. Ver Hoeve and S.M. Wu, eds) Mosby, Elsevier, pp. 574-585.

## **ABSTRACTS**

Casagrande, V. A., W. C. Hall, and I. T. Diamond (1971) Superior colliculus ablation in tree shrews (*Tupaia glis*). *Federation Proceedings* 30: 2347 (Abs.).

Harting, J. K., V. A. Casagrande, I. T. Diamond, K. K. Glendenning, J. A. Hall and W. C. Hall (1971) The connections of individual laminae in the lateral geniculate body, the striate cortex and the superior colliculus of the tree shrew (*Tupaia glis*) and the bushbaby (*Galago senegalensis*) *Fourth International Congress of Primatology*, p. 31 (Abs.).

Casagrande, V. A., W. C. Hall, and I. T. Diamond (1972) Formation of anomalous projections from the retina to the pulvinar following removal of the superior colliculus in neonatal tree shrews. *Society for Neuroscience*, p. 231 (Abs.).

Glendenning, K. K., V. A. Casagrande, J. A. Hall and W. C. Hall (1973) An analysis of connections of the interior superior divisions of the pulvinar nucleus of bushbaby (*Galago senegalensis*). *Society for Neuroscience* p. 301 (Abs.).

Casagrande, V. A. (1974) The laminar organization and connections of the lateral geniculate nucleus in the tree shrew (*Tupaia glis*). *Anatomical Record* 178:323 (Abs.).

Casagrande, V. A., R. W. Guillery, J. K. Harting, and I. T. Diamond (1974) Effects of visual deprivation on the LGN of *Tupaia glis*. *ARVO*, p. 52. (Abs.)

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Harting, J. K., and V. A. Casagrande (1974) Afferent connections of the pulvinar nucleus in the tree shrew. *Society for Neuroscience*, p. 248 (Abs.).
- Raczkowski, D., I. T. Diamond, and V. A. Casagrande (1974) Behavioral study of descending pathways from the deep layers of superior colliculus in *Tupaia glis*. *Society for Neuroscience*, p. 385 (Abs.).
- Casagrande, V. A. and R. W. Guillery (1974) On modifying the visual fields of Siamese cats. *ARVO*, p. 78 (Abs.).
- Guillery, R. W. and V. A. Casagrande (1975) On restoring visual functions to the temporal retina in Siamese cats. *Anatomical Record* 181:366 (Abs.).
- Norton, T. T., V. A., Casagrande, and S. M. Sherman (1975) X- and Y-cells in the lateral geniculate nucleus of the tree shrew. *ARVO*, p. 101 (Abs.).
- Kaas, J. H., C. Lin, and V. A. Casagrande (1976) Projections of area 18 (VII) of owl monkeys. *ARVO*, p. 2 (Abs.).
- Harting, J. K., V. A. Casagrande, J. H. Kaas, and R. W. Guillery (1976) The organization of retinotectal pathways in cats and primates. *Society for Neuroscience*, p. 47 (Abs.).
- Norton, T. T., V. A. Casagrande, and S. M. Sherman. (1976) Absence of Y-cells in deprived laminae of tree shrew in LGN after monocular lid suture, *ARVO*, p. 69 (Abs.).
- Casagrande, V. A., T. B. Norton, R. W. Guillery, and J. K. Harting (1976) Studies of binocular competition in the development of visual pathways of the tree shrew. *Neuroscience Abstracts* 2:1072 (Abs.).
- Huerta, M. F., V. A. Casagrande, J. T. Weber, and J. K. Harting (1976) Transneuronal transport of 3H proline within the visual system of the grey squirrel. *Neuroscience Abstracts* 2:1078 (Abs.).
- Casagrande, V. A., D. Raczkowski, and I. T. Diamond (1977) Effects of visual deprivation on the development of visual pathways in the Galago. *Society for Neuroscience* 3:555. (Abs.).
- Lemkuhle, S., V. A., Casagrande, and R. Fox (1977) Bilateral retino-Wulst projections in Falcon revealed by transneuronal transport of 3H proline. *Society for Neuroscience* 3:567 (Abs.).
- Florence, S. L.\* and V. A. Casagrande (1978) Effects of visual deprivation of geniculostriate pathways in tree shrew. *Journal of the South Carolina Medical Association* 74: 48 (Abs.).
- Casagrande, V. A., R. Joseph,\* and S. L. Florence\* (1978) Effects of monocular deprivation on geniculostriate connections in prosimian primates. *Anatomical Record* 190:359 (Abs.).
- Florence,\* S. L. and V. A. Casagrande (1978) A note on the evolution of ocular dominance columns in primates. *ARVO*, 291 (Abs.).
- DeBruyn, E.\* and V. A. Casagrande (1978) Density and central projections of retinal ganglion

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

cells in the tree shrew. *Neuroscience Abstracts* 4: 624 (Abs.).

Graham, J.\* and V. A. Casagrande (1978) A light microscopic and electron microscopic study of the superficial layers of the superior colliculus of the tree shrew (*Tupaia glis*). *Society for Neuroscience* 4:630 (Abs.).

Joseph, R.\* and V. A. Casagrande (1978) Visual field defects and morphological changes resulting from monocular deprivation in prosimian primates. *Society for Neuroscience* 4: 633 (Abs.)

McKanna, J. A. and V. A. Casagrande (1978) Subnormal lens development in lid suture myopia. Second International Conference on Myopia (Abs.).

Casagrande, V. A. and J. A. McKanna (1978) Ciliary zonule dysplasia in lid suture myopia. Second International Conference on Myopia (Abs.).

McKanna, J. A. and V. A. Casagrande (1978) Zonular dysplasia in myopia. Proceedings of the Second International Conference on Myopia, Yokohama, Japan, pp. 21-23 (Abs.).

Florence, S. L.\* and V. A. Casagrande (1978) A note on the evolution of ocular dominance columns in primates. *Supplement to Investigations in Ophthalmology and Vision Science* 17:291 (Abs.).

DeBruyn, E.\* and V. A. Casagrande (1979) A comparison of the retinal ganglion cell distribution in two species of galago. *Anatomical Record* 193:164. (Abs.)

Casagrande, V. A., E. DeBruyn,\* and E. C. Haseltine\* (1979) Effects of visual deprivation in a New World primate. *Supplement to Investigations in Ophthalmology and Vision Science* 159 (Abs.).

Haseltine, E.C.,\* E.J. DeBruyn,\* and V. A. Casagrande (1979) Demonstration of ocular dominance columns in Nissl stained sections of monkey visual cortex following enucleation. *Society for Neuroscience* 5:788.

McKanna, J.A. and V. A. Casagrande (1979) Quantification of zonular dysplasia in lid suture myopia. *Supplement to Investigations in Ophthalmology and Vision Science* 18:158 (Abs.).

Casagrande, V. A., E. DeBruyn,\* and E.L. Haseltine\* (1979) Effects of visual deprivation on the geniculo-cortical organization of a New-World primate. *Supplement to Investigations in Ophthalmology and Vision Science* 20:159 (Abs.).

Brunso-Bechtold, J.K.,\* and V. A. Casagrande (1980) Early postnatal development of the dorsal lateral geniculate nucleus of the tree shrew. *Anatomical Record* 196:24A (Abs.).

Birecree, E.A.,\* S. Florence,\* and V. A. Casagrande (1980) Effect of deprivation on cortico-geniculate projections in tree shrew. *Supplement to Investigations in Ophthalmology and Vision Science* 19: 242 (Abs.).

Casagrande, V. A. and L.C. Skeen (1980) Organization of ocular dominance columns in galago

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- demonstrated by autoradiographic and deoxyglucose methods. *Society for Neuroscience* 6:315 (Abs.).
- DeBruyn, E. J.\* and V. A. Casagrande (1980) Tree shrew retinal ganglion cells: differences in nasal and temporal retina. *Society for Neuroscience* 6:348 (Abs.).
- Brunso-Bechtold, J.K.\* and V. A. Casagrande (1980) The effect of binocular enucleation on laminar development in the dorsal lateral geniculate nucleus. *Society for Neuroscience* 6:790 (Abs.).
- Wise, V. L.,\* E. J. DeBruyn,\* and V. A. Casagrande (1980) Morphological differences in nasal and temporal retina of the cat. *Society for Neuroscience* 6:348 (Abs.).
- Norton, T. and V. A. Casagrande (1980) Laminar differences in receptive field properties of lateral geniculate neurons in a prosimian primate (*Galago crassicaudatus*). *Society for Neuroscience* 6:584 (Abs.).
- Casagrande, V. A. (1980) Evolutionary aspects of the visual system and its development in tree shrew and galago. *Anthropologia Contemporanea* 3:178 (Abs.).
- Wise, V.L.\* and V. A. Casagrande (1981) Effects of short- and long-term deprivation of the cat retina. *Supplement to Investigations in Ophthalmology and Vision Science* 20:240 (Abs.).
- Birecree, E.\* and V. A. Casagrande (1981) Laminar differences in the morphology of the lateral geniculate nucleus in galago. *Society for Neuroscience* 7:421 (Abs.).
- DeBruyn, E. J.,\* J. Tigges, and V. A. Casagrande (1982) Variations in primate retinal ganglion cell organization. *Supplement to Investigations in Ophthalmology and Vision Science* 22:246 (Abs.).
- Petry, H. M.,\* R. Fox, and V. A. Casagrande (1982) Behavioral measurement of spatial contrast sensitivity in the tree shrew. *Supplement to Investigations in Ophthalmology and Vision Science* 22:252 (Abs.).
- Brunso-Bechtold,\* J. K. and V. A. Casagrande (1982) Laminar development in the lateral geniculate nucleus (LGN) in tree shrew. *Anatomical Record* 202:215 (Abs.).
- Brunso-Bechtold,\* J. K., S. L. Florence,\* and V. A. Casagrande (1982) The development of laminar patterns of extraretinal projections in the dorsal lateral geniculate nucleus. *Society for Neuroscience* 8: 814 (Abs.).
- Sesma, M. A.,\* T. Kuyk, T. T. Norton, and V. A. Casagrande (1982) Geniculate Y-like cells remain after monocular deprivation in a primate. *Society for Neuroscience* 8:3 (Abs.).
- Petry, H. M.\* and V. A. Casagrande (1983) Evidence for cone receptors in the Galago retina. *Supplement to Investigations in Ophthalmology and Vision Science* 24:258 (Abs.).
- McKanna, J. A., V. A. Casagrande, T. T. Norton, and W. Marsh (1983) Dark-reared tree shrews do not develop lid-suture myopia. *Supplement to Investigations in Ophthalmology and*

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

*Vision Science* 24: 226 (Abs.).

Kuyk, T.K., G. E. Irvin, H. M. Petry,\* V. A. Casagrande, and T. T. Norton (1983) Latencies to visual stimulation and spatial tuning in primate X-like and Y-like LGN cells. *Supplement to Investigations in Ophthalmology and Vision Science* 24: 264 (Abs.).

Florence, S. L.,\* M. A. Sesma,\* and V. A. Casagrande (1983) Terminal arborization patterns of geniculo-striate axons in *Galago*. *Supplement to Investigations in Ophthalmology and Vision Science* 24:265 (Abs.).

DeBruyn, E.J\* and V. A. Casagrande (1983) Morphological differences in retinal ganglion cells projecting to different layers of the dorsal lateral geniculate nucleus in tree shrew. *Society for Neuroscience* 9:809 (Abs.).

Sesma, M.A.,\* V. A. Casagrande, and J.H. Kaas (1983) Cortical connections of striate cortex in tree shrews. *Society for Neuroscience* 9:1220 (Abs.).

Casagrande, V. A. and J.K. Brunso-Bechtold\* (1983) The relationship between afferent laminar development and cell layer formation in the lateral geniculate nucleus (LGN). *Society for Neuroscience* 9:25 (Abs.).

Irvin, G.E., M.A. Sesma,\* T.K. Kuyk, T.T. Norton, and V. A. Casagrande (1983) Visual response latencies and contrast sensitivity functions in primate LGN after monocular deprivation. *Society for Neuroscience* 9:25 (Abs.).

Irvin, G.E., T.T. Norton, M.A. Sesma,\* and V. A. Casagrande (1984) W-like receptive-field properties of the interlaminar cells in primate lateral geniculate nucleus. *Society for Neuroscience* 10:297 (Abs.).

Florence, S.L.\* and V. A. Casagrande (1984) Postnatal development of geniculostriate axons in galago. *Society for Neuroscience* 10:142 (Abs.).

Brunso-Bechtold, J.K.,\* A.J. Sweatt, D. Moore-Smith,\* and V. A. Casagrande (1984) Ultrastructure of the developing tree shrew lateral geniculate nucleus. *Society for Neuroscience* 10:142 (Abs.).

Sesma, M.A.,\* V. A. Casagrande, and J.H. Kaas (1984) Connections of striate cortex projection zone, area TD, in tree shrews. *Society for Neuroscience* 10:933 (Abs.).

McKanna, J.A. and V. A. Casagrande (1985) Chronic cycloplegia prevents development of lid-sutured myopia in tree shrews. *Supplement to Investigations in Ophthalmology and Vision Science* 26:331 (Abs.).

Bonds, A. B., V. A. Casagrande, T.T. Norton, and E.J. DeBruyn\* (1985) Visual resolution and sensitivity in a nocturnal primate measured with visual evoked potentials (VEPs). *Supplement to Investigations in Ophthalmology and Vision Science* 26:267 (Abs.).

Casagrande, V. A., G.J. Condo,\* and L.A. Durden\* (1985) The effect of Neural activity on the formation of geniculate cell layers. *Society for Neuroscience* p.11 (Abs.).

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Casagrande, V. A., G. Irvin, T. Norton, M. Sesma,\* and H. Petry\* (1986) Difference of Gaussians model of CSF's from W-, X-, and Y-like cells in primate LGN. *Supplement to Investigations in Ophthalmology and Vision Science* 27:16 (Abs.).
- Irvin, G.E., T.T. Norton, and V. A. Casagrande (1986) Receptive-field properties derived from spatial contrast sensitivity measurements of primate LGN cells. *Supplement to Investigations in Ophthalmology and Vision Science* 27:16 (Abs.).
- M.A. Sesma\* and V. A. Casagrande (1986) The nasotemporal division of the retina in a nocturnal primate. *Supplement to Investigations in Ophthalmology and Vision Science* 27:222 (Abs.).
- Lachica, E.A.,\* G.J. Condo,\* M. Conley,\* and V. A. Casagrande (1986) Development of retinogeniculate axonal arbors in a primate. *Society for Neuroscience* 12:589 (Abs.).
- Hutchins, J.B.\* and V. A. Casagrande (1986) Ontogeny of cholinergic neurotransmission in the tree shrew lateral geniculate nucleus. *Society for Neuroscience* 12:590 (Abs.).
- Casagrande, V. A., G.J. Condo,\* and E.A. Lachica\* (1986) Postnatal development of cytochrome oxidase staining in tree shrew lateral geniculate nucleus. *Society for Neuroscience* 12:590 (Abs.).
- Condo,\* G.J., E.A. Lachica,\* and V. A. Casagrande (1986) Postnatal development of retinogeniculate axonal arbors in the tree shrew. *Society for Neuroscience* 12:440. (Abs.), .
- Lachica,\* E.A., J.B. Hutchins\* and V. A. Casagrande (1987) Early development of tree shrew retina: observations using Nissl, cytochrome oxidase and acetylcholinesterase (AChE) stains. *Supplement to Investigations in Ophthalmology and Vision Science* 28(3):348 (Abs.).
- Condo,\* G.J., S.L. Florence\* and V. A. Casagrande (1987) Development of laminar and columnar patterns of cytochrome oxidase activity in galago visual cortex. *Society for Neuroscience* 13:1025 (Abs.).
- Lachica,\* E.A., J.B. Hutchins\* and V. A. Casagrande (1987) Morphology of corticogeniculate axon arbors in a primate. *Society for Neuroscience* 13:1434. (Abs.).
- Hutchins,\* J.B. and V. A. Casagrande (1987) Lamination of glial cell markers precedes the formation of neuronal lamination in the lateral geniculate nucleus (LGN). *Society for Neuroscience* 13:591 (Abs.).
- Casagrande, V. A. and J.B. Hutchins\* (1988) Developmental glial cell lamination in the ferret lateral geniculate nucleus (LGN). *Society for Neuroscience* 14:38 (Abs.).
- Lachica,\* E.A., M.W. Crooks,\* and V. A. Casagrande (1988) Morphology of retinogeniculate axon arbors in monocularly deprived primates. *Society for Neuroscience* 14:310 (Abs.).
- Hutchins,\* J.B. and V. A. Casagrande (1988) Cholinergic profiles in the lateral geniculate nucleus (LGN): light and electron microscopic observations. *Society for Neuroscience*



*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11  
14:38 (Abs.).

Lachica,\* E.A., S.L. Florence,\* M.W. Crooks,\* and V. A. Casagrande (1989) The morphology of geniculocortical axon arbors in a monocularly deprived primate. *Supplement to Investigations in Ophthalmology and Vision Science* 30(3):30 (Abs.).

Lachica,\* E.A. and V. A. Casagrande (1989) The morphology of primate W-like geniculocortical axons which arborize in area 17. *Society for Neuroscience* 15:1107 (Abs.).

Casagrande, V. A., P.D. Beck,\* and E.A. Lachica\* (1989) Intrinsic connections of cytochrome oxidase (Co) blob and nonblob regions in area 17 of a nocturnal primate. *Society for Neuroscience* 15:1398 (Abs.).

Casagrande, V. A., P.D. Beck,\* G.J. Condo, and E.A. Lachica\* (1990) Intrinsic connections of CO Blobs in striate cortex of primates (*Saimiri sciureus* and *Galago crassicaudatus*). *Supplement to Investigations in Ophthalmology and Vision Science* 31:396 (Abs.).

Claps,\* A. and V. A. Casagrande (1990) The development of corticogeniculate connections in the ferret. *Society for Neuroscience* 16:494 (Abs.).

Condo, G.J.,\* A. Claps\* and V. A. Casagrande (1990) Morphology of corticogeniculate axons in adult ferrets (*Mustela putorius*). *Society for Neuroscience* 16:494 (Abs.).

Lachica, E.A.\* and V. A. Casagrande (1990) The structure of retinal and collicular axons that terminate on primate W-like LGN cells. *Society for Neuroscience* 16:710(Abs.).

Bonds, A. B., V. A. Casagrande, E.J. DeBruyn,\* and P.D. Beck\* (1991) Responses of single cells in area 17 of a nocturnal primate (*Galago*). *Investigations in Ophthalmology and Vision Science* 32:1116 (Abs.).

Johnson,\* J. K., and V. A. Casagrande (1991) Early development of connections between the lateral geniculate nucleus (LGN) and cortex in ferrets. *Investigations in Ophthalmology and Vision Science* 32:1035 (Abs.).

Mavity-Hudson, J.A., J.P. Witty,\* and V. A. Casagrande (1991) Distribution of the 3-fucosyl-n-acetyl-lactosamine (FAL) epitope in developing interlaminar zones of the tree shrew dorsal lateral geniculate nucleus. *Investigations in Ophthalmology and Vision Science* 32:1035 (Abs.).

Johnson,\* J.K. and V. A. Casagrande (1991) Transcellular diffusion events of the carbocyanine dye, DiA in the embryonic ferret visual system. *Society for Neuroscience* 17:1133 (Abs.).

Mavity-Hudson, J.A., J. Witty,\* and V. A. Casagrande (1991) The expression of 3-fucosyl-N-acetyl-Lactosamine (FAL) on glia in relationship to neuronal layer development. *Society for Neuroscience* 17:760 (Abs.).

McKanna, J.A., J.K. Johnson,\* and V. A. Casagrande (1992) Axon guidance at the developing rat optic chiasm: Alterations in the expression of P35 (Annexin I) related to the Albino Defect. *Investigations in Ophthalmology and Vision Science Supplement* 33:1212

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11  
(Abs.).

Casagrande, V. A. and E.A. Lachica\* (1992) What are the cytochrome oxidase (CO) blobs and interblobs really segregating. *Investigations in Ophthalmology and Vision Science Supplement* 33:900 (Abs.).

Johnson,\* J.K., J.A. McKanna, and V. A. Casagrande (1992) Transcellular staining in the optic chiasm of Albino and normally pigmented prenatal rats. *Investigations in Ophthalmology and Vision Science Supplement* 33:1212 (Abs.).

Casagrande, V. A., J.A. Mavity-Hudson, and J.G. Taylor\* (1992) Intrinsic connections of owl monkey striate cortex: difference between cytochrome oxidase (Co) blobs and interblobs. *Society for Neuroscience* 18:389 (Abs.),.

Johnson,\* J.K. and V. A. Casagrande (1992) Behavior of lipophilic dyes in the embryonic mammalian visual system. *Society for Neuroscience* 18:1126 (Abs.),.

Allison,\* J. D., V. A. Casagrande, E.J. DeBruyn,\* J.E. Kabara, R.K. Snider, A.C. Palmer, and A. B. Bonds (1993) Contrast adaptation of V1 Neurons in a nocturnal primate Galago Crassicaudatus. *Investigations in Ophthalmology and Vision Science Supplement* 34:793 (Abs.).

Johnson,\* J.K. and V. A. Casagrande (1993) Parvalbumin and calbindin immunoreactivity correlates with cytochrome oxidase expression in visual parallel pathways of the prosimian primates, *Galago crassicaudatus*. *Investigations in Ophthalmology and Vision Science Supplement* 34:1173 (Abs.).

Johnson,\* J.K. and V. A. Casagrande (1993) Calcium-binding protein expression correlates with primate visual parallel pathways. *Society for Neuroscience* (Abs.) 19:425.

Littlejohn,\* C.D. and V. A. Casagrande (1994) Axon development in striate cortex (V1) of prenatal macaque monkeys. *Investigations in Ophthalmology and Vision Science Supplement* 35:1773 (Abs.).

Allison,\* J. D., V. A. Casagrande, and A. B. Bonds (1994) Inactivation of the infragranular layers of V1 changes the orientation selectivity of supragranular neurons in the prosimian primate, *Galago crassicaudatus*. *Investigations in Ophthalmology and Vision Science Supplement* 35:1972 (Abs.).

Allison,\* J. D. and V. A. Casagrande (1994) Receptive field structure of V2 neurons in the prosimian primate *Galago crassicaudatus*. *Society for Neuroscience* 20:1741 (Abs.).

McKanna, J.A. and V. A. Casagrande (1994) Lipocortin I and phosphotyrosine identify microglia in adult and embryonic rat CNS. *Society for Neuroscience* 20:872 (Abs.).

Allison,\* J. D., V. A. Casagrande, R.K. Snider, J.F. Kabara, and A. B. Bonds (1995) The GABAB-receptor blocker phaclofen reduces orientation tuning of striate cortical neurons in cats. *Investigations in Ophthalmology and Vision Science Supplement* 35:S692.

Zhang, M.Z., G.S. Edwards, L. Reinisch, and V. A. Casagrande (1995) Microglial Responses to

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Free-Electron Laser Incisions In Rat Brain. *The FASEB Journal* 9: A382 (Abs.).
- Zhang, M.-Z., G.S. Edwards, L. Reinisch, V. A. Casagrande, and J.A. McKanna (1995) Microglial responses to free-electron laser incisions in rat brain. 17th International Free-Electron Laser Conference and 2nd International EL Users Workshop (Abs.).
- Allison,\* J. D., P. Melzer,\* Y. Ding,\* J. Dinger,\* A. B. Bonds, and V. A. Casagrande (1995) The contribution of LGN M and P layers to the contrast sensitivity of primate VI neurons. *Society for Neuroscience* 21:1647 (Abs.).
- Ding,\* Y. and V. A. Casagrande (1995) The morphology of LGN axons that terminate in the CO blobs and primate VI. *Society for Neuroscience* 21:394 (Abs.).
- Wiencken,\* A.E. and V. A. Casagrande (1996) The distribution of NADPH-diaphorase/nitric oxide synthase (NOS) within the layers and functional compartments of Primate visual cortex. *Investigations in Ophthalmology and Vision Science Supplement* 37:S47 (Abs.).
- Ichida,\* J.M., M.G.P., Rosa and V. A. Casagrande (1996) Distribution of calcium binding proteins in the lateral geniculate nucleus of the megachiropteran bat, *Pteropus poliocephalus*. *Investigations in Ophthalmology and Vision Science Supplement* 37: S481 (Abs.).
- Ding,\* Y., J. D. Boyd\* and V. A. Casagrande (1996) Excitatory and inhibitory synaptic circuits of parallel pathways to the CO blobs of primate visual cortex. *Society for Neuroscience* 22:640 (Abs.).
- Bosking, L.E., L.E. White, V. A. Casagrande and D. Fitzpatrick (1996) Functional organization of areas V1 and V2 in the prosimian galago revealed by optical imaging. *Society for Neuroscience* 22:1610 (Abs.).
- Hendry, S. H. C. and V. A. Casagrande (1996) A common pattern for a third visual channel in the primate LGN. *Society for Neuroscience* 22:1605 (Abs.).
- Boyd,\* J. D. and V. A. Casagrande (1996) Modular architecture of cells projecting from primary visual cortex (V1) to area MT. *Society for Neuroscience* 22:640 (Abs.).
- Wiencken,\* A.E. and V. A. Casagrande (1996) The distribution of NADPH-diaphorase/nitric oxide synthase (NOS) cells within the layers and functional compartments of primate V1 and V2. *Society for Neuroscience* 22:641 (Abs.).
- Olavarria, J.F., H. Qi, V. A. Casagrande, and J.H. Kaas (1997) Patterns of ocular dominance domains and cytochrome oxidase blobs in striate cortex of the prosimian primate galago. *Society for Neuroscience* 23:2361 (Abs.).
- Boyd,\* J. D., B.R. Roig, V. A. Casagrande, and A. B. Bonds (1997) Suppressive surrounds in cat lateral geniculate neurons. *Investigations in Ophthalmology and Vision Science Supplement* 38:S361 (Abs.).
- Yamada, E.S., D.W. Marshak and V. A. Casagrande (1997) Morphology of P and M ganglion cells in the bush baby. *Society for Neuroscience* 23:728 (Abs.).

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Boyd,\* J. D., R. Guerguerian\* and V. A. Casagrande (1997) Extrastriate efferents distinguish a tripartite modular organization of V2 in the prosimian primate galago. *Society for Neuroscience* 23:845 (Abs.).
- Casagrande, V. A., Y. Ding\* and J. D. Boyd\* (1997) The morphology of LGN axons from different K layers in V1 of macaque monkey. *Society for Neuroscience* 23:2361 (Abs.).
- Ding,\* Y., M. Pospichal. and V. A. Casagrande (1997) A comparison of the synaptic circuits of M, P, and K LGN axons in owl monkey primary visual cortex (V1). *Society for Neuroscience* 23:2361 (Abs.).
- Ichida,\* J.M. and V. A. Casagrande (1997) Morphology and distribution of corticogeniculate axons in the owl monkey. *Society for Neuroscience* 23:2361 (Abs.).
- Wiencken,\* A.E., L.M. Fleming and V. A. Casagrande (1997) Morphology of axons from the striate cortex (V1) to the pulvinar in owl monkeys. *Society for Neuroscience* 23: 2361 (Abs.).
- Ding, Y. and V. A. Casagrande (1997) The distribution and morphology of LGN K pathway axon within the layers and CO blobs of owl monkey V1. *Visual Neuroscience* 14(4):691-704 (Abs.)
- Rosa, M. G., V. A. Casagrande, T. Preuss, and J. H. Kaas (1997) Visual field representation in striate and prestriate cortices of a prosimian primate (*Galago garnettii*). *Journal of Neurophysiology* 77(6): 3193-3217 (Abs.)
- Shen, J. H., V. A. Casagrande, K. M. Joos, D. J. Shetlar, R.D. Robinson, W.S. Head, J.A., Mavity-Hudson, and A.H. Nunnally (1998) Acute optic nerve sheath fenestration with the free electron laser. *Investigations in Ophthalmology and Vision Science Supplement* 39:S769 (Abs.).
- Joos, K. M., V. A. Casagrande, J. H. Shen, D.J. Shetlar, R.D. Robinson, J.A. Mavity-Hudson, A. H. Nunnally, and W. S. Head (1998) Free electron laser or knife optic nerve sheath fenestration: one month postoperative histologic comparison. *Investigations in Ophthalmology and Vision Science Supplement* 39:S770 (Abs.).
- Ichida\* J. M. and V. A. Casagrande (1998) Termination patterns of corticogeniculate feedback axons in the owl monkey. *The FASEB Journal*,p.A760. (Abs).
- Boyd\* J. D., V. A. Casagrande, and A. B. Bonds (1998) How distinct are the lateral geniculate nucleus (LGN) inputs to areas 17 and 18 in the cat? *Society for Neuroscience* 24:894 (Abs.).
- Shen, J. H. , V. A. Casagrande, K. M. Joos, D. J. Shetlar, R.D. Robinson, W.S. Head, J.A. Mavity-Hudson and A.H. Nunnally (1998) Optic Nerve Sheath Fenestration with the Free Electron Laser Versus Knife FEL-98-174 User Workshop Abstract (Abs.).
- Casagrande, V. A., K.M. Joos, D.J. Shetlar, M.K. Powers and J.H. Shen (1999) Chronic and acute optic nerve sheath fenestration in monkeys using the free electron laser (FEL).

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

*Investigations in Ophthalmology and Vision Science* 40(4):S857. (Abs.).

- Shen, J.H, K.M. Joos, V. A. Casagrande, S. Feman, A. Agarwal, and W. Sun (1999) Experimental vitrectomy with the free electron laser (FEL). *Investigations in Ophthalmology and Vision Science* 40(4):S736 (Abs..)
- Wiencken,\* A., M. Kamburowski,\* H. Tomasiewicz and V. A. Casagrande (1999) Cortical development in mutant mice lacking polysialylated neural cell adhesion molecule (NCAM-180). *Society for Neuroscience* 25:778 (Abs.).
- Ichida,\* J. and V. A. Casagrande (1999) The morphology and distribution of intracellularly labeled corticogeniculate projection cells in bush baby. *Society for Neuroscience* 25:1424 (Abs.).
- Xu,\* X., J. Boyd,\* J. D. Allison,\* J. Ichida,\* A. B. Bonds, and V. A. Casagrande (1999) Receptive field properties of K cells in the lateral geniculate nucleus (LGN) of owl monkeys (*Aotus trivirgatus*) *Society for Neuroscience* 25:1427 (Abs.).
- Wiencken, A.,\* A. Cooper,\* M. Kutsche,\* M. Schachner, H. Tomasiewicz, and V. Casagrande (2000) Thalamocortical development in mutant mice lacking either the polysialylated form of neural cell adhesion molecule (NCAM-180) or L1. *The FASEB Journal* 14:A544 (Abs.).
- Ichida,\* J. and V. A. Casagrande (2000) Corticogeniculate feedback in the primate visual system. *Experimental Biology* 14:A541 (Abs.).
- Casagrande, V. A. (2000) Changing views of functional modules in primate visual cortex. *Experimental Biology* 14:A540 (Abs.).
- Shieh. F., Topadze, K, Shen, J., Casagrande, V., Robinson, R, Joos, K. (2000) Free electron laser-treated Tisseel aids closure of trabeculectomy leaks. *Investigations in Ophthalmology and Vision Science* 41 (Abs.).
- Joos, K.M., K. Topadze, C. Shieh, J. H. Shen, and V. A. Casagrande (2000) Free electron laser effects upon fibrin tissue glue: a preliminary study. *Investigations in Ophthalmology and Vision Science* 41 (Abs.).
- Shostak,\* Y., J. Mavity-Hudson, and V. A. Casagrande (2000) Synaptic and neurochemical analysis of the koniocellular (K) pathway within the cytochrome oxidase (CO) blobs of squirrel monkey visual cortex. *Society for Neuroscience Abstracts* 30:54.15.
- Song,\* Z., J. Mavity-Hudson, and V. A. Casagrande (2000) Neurochemical diversity in the koniocellular (K) cells of macaque monkey lateral geniculate nucleus (LGN). *Society for Neuroscience Abstracts* 26:447.23.
- Xu,\* X., J.M. Ichida,\* J. D. Allison,\* A. B. Bonds, and V. A. Casagrande (2000) Orientation and direction selectivities of lateral geniculate nucleus (LGN) cells in the owl monkey. *Society for Neuroscience Abstracts* 30:447.3.
- Wiencken,\* A.E., A. Cooper,\* M. Kutsche,\* M. Schachner, H. Tomasiewicz, and V. A.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Casagrande (2000) A role for polysialylation on NCAM in thalamocortical axon fasciculation: links to the cytoskeleton. *Society for Neuroscience Abstracts* 30:508.12.
- Sáry,\* G., X. Xu,\* Y. Shostak,\* J. Schall and V.Casagrande (2001) Behavioral relevance influences LGN neurons of macaque monkey in the absence of receptive field stimulation, *Vision Science Society* 1:30-B30 (Abs.).
- Casagrande, V.A (2001) Conservation and change in primate vision. Anthropoid Origins Symposium (Abs.)
- Casagrande, V.A (2001) Partitioning the image: How many parallel pathways are there and what are they doing? XXXIVth International Congress of Physiological Sciences (Abs.) Christchurch, New Zealand.
- Casagrande, V.A (2001) Static and dynamic views of visual cortical organization. Cajal Club/Cajal Institute International Conference *Changing Views of Cajal's Neuron* (Abs.) Madrid, Spain.
- Joos, K.M., L.A. Mawn, J.H. Shen, E.D. Jansen, and V. A. Casagrande (2001) Acute optic nerve sheath fenestration in humans: a preliminary study. *Investigations in Ophthalmology and Vision Science* 1761-B11 (Abs.).
- Xu,\* X., P. Pratumrat,\* A. B. Bonds, and V. A. Casagrande (2001) Center/surround relationships of koniocellular (K), Magnocellular (M), and parvocellular (P) cells in lateral geniculate nucleus (LGN) of the owl monkey. *Society for Neuroscience Abstracts* 27:723.16 (Abs.).
- Shostak,\* Y., and V. A. Casagrande (2001) Metabotropic glutamate receptor5 (mGluR5) shows different patterns of localization within the parallel visual pathways in primates. *Society for Neuroscience Abstracts* 27:619.4 (Abs.).
- Sáry,\* Gy., X. Xu,\* Y. Shostak,\* J. Schall, and V. Casagrande (2001) Extraretinal modulation of cells in the lateral geniculate body (LGN). *Society for Neuroscience Abstracts* 27:723.15 (Abs.).
- Ichida,\* J., D. Royal,\* Gy. Sáry,\* X. Xu,\* Y. Shostak,\* J. Schall, and V. Casagrande (2001) Evidence for suppression of activity in both parvocellular (P) and magnocellular (M) lateral geniculate nucleus (LGN) cells during saccadic eye movements. *Society for Neuroscience Abstracts* 27:723.6 (Abs.).
- Song,\* Z., J. Broome\*, J. Mavity-Hudson, A. Wiencken-Barger,\* J. Malpeli, V. A. Casagrande (2001) The distribution of koniocellular lateral geniculate nucleus (LGN) cells in macaque monkey. *Society for Neuroscience Abstracts* 27:723.5 (Abs.).
- Joos, K.M., J.H. Shen, R. D. Robinson, V. A. Casagrande (2002) Free electron laser-treated tissue aids closure of trabeculectomy leaks. *Investigations in Ophthalmology and Vision Science* (Abs.)
- Joos, K., Mawn, L. Shen, J., Jansen E. D., and Casagrande V. A.(2002) Acute optic nerve sheath fenestration in humans using the free electron laser (FEL): a preliminary study, SPIE

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

Ophthalmic Technologies XII B BIOS. (Abs.)

Xu,\* X., W.Bosking, Gy. Sáry,\* M. Jones, D. Royal,\* J. Stefansic, D.Shima, D. Fitzpatrick and V. A. Casagrande (2002) The functional organization of orientation maps in owl monkey V1 and V2 revealed by optical imaging of intrinsic signals. *Vision Science Society, Journal of Vision, 2(7)*, 99a (Abs.)

Ichida\*, J.M. and V. A. Casagrande (2002) Morphological distinctions in cells that provide feedback to different layers of the primate lateral geniculate nucleus (LGN). Program No. 658.18. *2002 Abstract Viewer/Itinerary Planner*. Orlando FL: Society for Neuroscience, 2002. Online.

Wandell, B., D. Dacey, P. R. Martin, E. Callaway, V. Casagrande, D. T'so, R. Reid (2002) Primate color vision. Program No. 509. *2002 Abstract Viewer/Itinerary Planner*. Orlando FL: Society for Neuroscience, 2002. Online.

Shostak\*, Y., J.M. Ichida\*, and V. A. Casagrande (2002) Do primate corticogeniculate axons synapse primarily with excitatory relay cells or inhibitory interneurons? Program No. 352.13. *2002 Abstract Viewer/Itinerary Planner*. Orlando FL: Society for Neuroscience, 2002. Online.

Xu\*, X., W. Bosking, G. Sáry\*, J. Boyd, M. Jones\*, I. Khaytin\*, J. Stefansic, D. Shima, D. Fitzpatrick and V. A. Casagrande (2002) Orientation preference domains and their relation to cytochrome oxidase (CO) modules in owl monkey visual cortex. Program No. 325.13. *2002 Abstract Viewer/Itinerary Planner*. Orlando FL: Society for Neuroscience, 2002. Online.

Xu\*, X., J. Boyd\*, M. Gallucci, E. Emeric, B. Barahimi, J. Stefansic, D.Shima, P. Melzer, J. Allison, A.B. Bonds and V.A. Casagrande (2003) Spatial frequency preference maps of primate visual cortex revealed by optical imaging of intrinsic signals. *Vision Sciences Society, Journal of Vision, 3(9)*, 107a (Abs.).

Emeric, E.\* , X. Xu\*, J. Mavity-Hudson, M. Gallucci, A. Thomas, B. Barahimi, D. Shima, J. Stefansic, A.B. Bonds and V.A. Casagrande (2003) Visuotopic organization of bushy primary visual cortex (V1) revealed by optical imaging. *Vision Sciences Society, Journal of Vision, 3(9)*, 376a (Abs.).

Thomas, A., M. Gallucci, X. Xu\*, J. Allison, J. Stefansic, D. Shima, V. Casagrande & A. B. Bonds (2003) Compound stimuli promote architectural reorganization in cat striate cortex. *Vision Sciences Society, Journal of Vision, 3(9)*: 379a (Abs.).

Royal, D\*. Gy. Sáry\*, J. Schall and V.A. Casagrande (2003) Is there a relationship between spike bursts in the lateral geniculate nucleus (LGN) and behavioral events? *Vision Sciences Society, Journal of Vision, 3(9)*, 366a (Abs.).

Casagrande , V.A., X. Xu\* and T. J. Anderson\* (2003) Is the map of orientation preference organized differently at different eccentricities? Program No. 125.5. *2003 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. Online.

Xu, X.\* , M.R. Gallucci, D.W. Shima, J.D. Stefansic, A.M. Thomas, T. Yokoo, A. Sornborger, A.B.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Bonds, and V.A. Casagrande (2003) Is there any relationship between cytochrome oxidase (CO) blobs and spatial frequency preference domains in primate visual cortex? Program No. 701.18. *2003 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. Online.
- Royal, D.W.\* , Gy. Sáry\*, J. Schall, and V.A. Casagrande (2003) Are spike bursts and pseudo-bursts in the lateral geniculate nucleus (LGN) related to behavioral events? Program No. 699.16. *2003 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. Online.
- Ichida, J.M.\* , D. Royal\*, Gy. Sáry\*, J. Schall, and V.A. Casagrande (2003) Are there significant onset latency differences between LGN cells that carry S cone signals compared to those that carry M or L cone signals? Program No. 699.17. *2003 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. Online.
- Royal D.W., Sáry Gy., Schall J., and Casagrande V.A. (2004) LGN Spike Bursts: How Often? How Relevant? *Thalamocortical Communication Symposium*, Madison, WI (Abs.)
- Royal, D.\* , Gy. Sáry\*, J. Schall, and V. Casagrande (2004) Does the lateral geniculate nucleus (LGN) pay attention? *Vision Sciences Society, Journal of Vision*, 4(8), 622a (Abs.).
- Khaytin, I.\* , X. Xu\*, C.E. Collins, P.M. Kaskan, D.W. Shima, J.H. Kaas, and V.A. Casagrande, (2004) The organization of the middle temporal visual area (mt) in bush babies and owl monkeys revealed by optical imaging. *Vision Sciences Society, Journal of Vision*, 4(8), 279a (Abs.).
- Xu, X., I\*. Khaytin, C.E. Collins, P.M. Kaskan, J.H. Kaas, and V.A Casagrande (2004) Unequal representation in the middle temporal (MT) visual area of primates. Program No. 526.4. *2004 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Couppis\*, M.H., I. Khaytin\*, F. Yazar, D.W. Royal\*, J. Mavity-Hudson, and V.A. Casagrande (2004) Retinogeniculocortical pathways: how many? Program No. 408.8. *Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Yazar, F., J.A. Mavity-Hudson, Y. Ding, E. Oztas, and V.A. Casagrande (2004) Layer IIIB (IVA) of primary visual cortex (V1) and its relationship to the koniocellular (K) pathway in macaque monkeys. Program No. 300.17. *2004 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Royal\*, D.W., Gy. Sáry, J. Schall, and V. Casagrande (2004) Spatial attention in the lateral geniculate nucleus (LGN): are effects across hemifields the same as within a hemifield? Program No. 331.9. *2004 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Blue\*, S., D. Royal\*, Gy. Sáry, O. Ruiz, and V. A. Casagrande (2004) Evidence for modulation of lateral geniculate nucleus cells during saccadic eye movements, Summer Neuroscience Apprentice Program for Undergraduates poster presentation.
- Collins, C.E., X. Xu\*, I. Khaytin\*, P.M. Kaskan, V. A. Casagrande, and J.H. Kaas (2004) Optical imaging of visually evoked responses in MT after deactivation of V1 in adult prosimian



*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

primates. Program No. 300.22. 2004 *Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.

Casagrande, Evolution of visual pathways (2005), *Vision Sciences Society, Journal of Vision*, 5(12), 32a (Abs.)

Ruiz\*, O., D. W. Royal\*, X. Chen\*, J. Schall, and V.A. Casagrande (2005) Another look at the impact of bursting in the lateral geniculate nucleus (LGN) of awake behaving monkeys. Program No. 506.5. 2005 *Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.

Khaytin\*, I., D.W. Royal\*, O. Ruiz\*, X. Chen\*, J.A. Mavity-Hudson, M.H. Couppis\*, and V.A. Casagrande, (2005) Does feedback from the middle temporal (MT) visual area influence maps of orientation and temporal frequency in V1. Program No. 508.4. 2005 *Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.

Smith, V.O.\*, Khaytin, I.\*, and V.A. Casagrande (2005) Functional organization of primary visual cortex of bush baby, Summer Neuroscience Apprentice Program for Undergraduates poster presentation.

Chen\*, X., W. J. Jermakowicz\*, I. Khaytin\*, Z. Zhou, M. Bernard, A.B. Bonds and V. Casagrande (2006) Dynamics of spatial frequency tuning in primate primary visual cortex (V1). Program No. 436.15/F5, 2006 *Abstract Viewer/Itinerary Planner*. Atlanta GA: Society for Neuroscience.

Jermakowicz\*, W. J., X. Chen\*, I. Khaytin\*, Z. Zhou, M. Bernard, A.B. Bonds and V.A. Casagrande (2006) Is local neuronal synchrony better at discriminating stimulus spatial frequency in primary visual cortex (V1) than firing rate? Program No. 734.12/J14, 2006 *Abstract Viewer/Itinerary Planner*. Atlanta GA: Society for Neuroscience.

Royal\*, D., P. Pouget, O. Ruiz\*, J. Schall, and V. Casagrande. (2006) Receptive field mapping with local field potentials (LFPs) and single unit activity (SUA) in macaque lateral geniculate nucleus (LGN). Program 241.6/110. 2006 *Abstract Viewer/Itinerary Planner*. Atlanta GA: Society for Neuroscience.

Jermakowicz\*, J.W., X. Chen\*, I. Khaytin\*, Z. Zhou, M. Bernard, A.B. Bonds and V.A. Casagrande (2006) Does spike synchrony provide a better code of stimulus angle than average firing rate? *Vision Sciences Society, Journal of Vision* 6(6): 66.

Agarwal, A., V. Casagrande, J. Shen, and K. M. Joos. (2007) Use of free electron laser (FEL) to perform retinotomies. Program No. 07-A-3155, 2007 ARVO Annual Meeting.

Jermakowicz, W., Chen, X., Khaytin, I., Madison, C., Zhou, Z., Bernard, M., Bonds, A. B., & Casagrande, V. (2007). Is Synchrony a reasonable coding strategy for visual areas beyond V1 in primates? *Journal of Vision*, 7(9): 325.

Khaytin\*, I., Chen\*, X., Jermakowicz\*, W., Mavity-Hudson\*, J., Purushothaman\*, G., and Casagrande, V. (2007) The effects of parvocellular (P) pathway inactivation on functional maps in primate V1. Program No. 663.1, 2007 *Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

- Purushothaman\*, G., Khaytin\*, I., and Casagrande, V. A. (2007) Detection and classification methods for optical images. Program No. 451.3, *2007 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Jermakowicz\*, W.J., Chen\*, X., Purushothaman\*, G., Khaytin\*, I., Zhou, Z., Bernard, M.R., Bonds, A.B., and Casagrande, V.A. (2007) How is stimulus-dependent synchrony related to background synchrony in the primate visual cortex? Program No. 394.16/JJ25, *2007 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Marion\*, R. T., Sáry, G. M., Chen\*, X., Purushothaman\*, G., and Casagrande V. A. (2007) Multisensory interactions decrease contrast sensitivity in the lateral geniculate nucleus (LGN). Program No. 620.20/SS6, *2007 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Casagrande, V. A., Purushothaman\*, G., Jermakowicz\*, W. J., and Khaytin\*, I. (2007) Effect of correlated variability in neural population response on information encoding and decoding for a fine discrimination task. Program No. 176.6/II27, *2007 Abstract Viewer/Itinerary Planner*. San Diego CA: Society for Neuroscience.
- Casagrande, V.A., Purushothaman\*, G., Marion\*, R.T., Jermakowicz\*, W.J., Khaytin\*, I., Godlove\*, D.C., Mavity-Hudson, J.A., Reyelts\*, C.D. Yampolsky\*, D., Bonds A.B. (2008) Extraclassical surround in area V1 of a nocturnal primate. Program No. 163.3/GG15, *2008 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.
- Godlove\*, D.C., Purushothaman\*, G., Marion\*, R.T., Jermakowicz\*, W.J., Khaytin\*, I., Mavity-Hudson, J.A., Bonds, A.B., Casagrande, V.A. (2008) Complex response properties of primate pulvinar neurons. Program No. 458.15/EE28, *2008 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.
- Jermakowicz\*, W.J., Khaytin\*, I., Marion\*, R.T., Bonds, A.B., Casagrande, V.A. (2008) Feedback from primate area MT synchronizes V1 neuron spikes. Program No. 568.20/KK29, *2008 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.
- Purushothaman\*, G., Khaytin\*, I., Jermakowicz\*, W.J., Marion\*, R.T., Godlove\*, D.C., Mavity-Hudson, J.A., Casagrande, V.A. (2008) Functional organization of orientation discrimination domains in the primary visual cortex. Program No. 514.7, *2008 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.
- Fan, R.H., Baldwin, M.K.L., Casagrande, V.A., Kaas, J.H., Roe, A.W. (2008) Orientation preference in dorsal V3 of prosimian galagos. Program No. 853.14/EE2, *2008 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience.
- Purushothaman\*, G., Khaytin\*, I., Marion\*, R., Jermakowicz\*, W., & Casagrande, V. (2009). Orientation detection and discrimination domains in the primary visual cortex [Abstract].

*Curriculum Vitae*  
Vivien A. Casagrande  
11/08/11

*Journal of Vision*, 9(8):748, 748a.

Jermakowicz\*, W., Marion\*, R., Khaytin\*, I., Zhou, Z., Bernard, M., Bonds, A., & Casagrande, V. (2009). Inactivation of area MT has separate influences on the spiking of single neurons and neuron populations in primate V1 [Abstract]. *Journal of Vision*, 9(8):671, 671a.

Purushothaman\*, G., Chen\*, X., Jermakowicz\*, W., Khaytin\*, I., Casagrande, V.A. (2009) Coarse-to-fine mechanisms for detection and discrimination in the primary visual cortex, Program No. 602.9, *2009 Abstract Viewer/Itinerary Planner*. Chicago, IL: Society for Neuroscience.

Marion\*, R.T., Tamborski\*, M.E., Mavity-Hudson\*, J.A., Jermakowicz\*, W.J., Purushothaman\*, G., Casagrande, V.A. (2009) The organization of pulvinar and V1 inputs to V2, Society for Neuroscience, Program No. 453.6/Y1, *2009 Abstract Viewer/Itinerary Planner*. Chicago, IL: Society for Neuroscience.

Yampolsky\*, D., Purushothaman\*, G., Casagrande, V.A. (2009) Why do orientation maps have pinwheels? Program No. 353.18/X17, *2009 Abstract Viewer/Itinerary Planner*. Chicago, IL: Society for Neuroscience.

R.H. Fan, m. K.L. Baldwin, W.J. Jermakowicz, V.A. Casagrande, J.H. Kaas, A.W. Roe (2010) Retinotopic evidence for dorsal V3 in galagos. Program No. 580.11/SS10, *2010 Abstract Viewer/Itinerary Planner, Society for Neuroscience*.

G. Purushothaman\*, R. Marion\*, S. Walston\*, K. Li\*, D. Yampolsky\*, Y. Jiang\*, V. Casagrande (2010) Functional role of pulvinar input to primary visual cortex in the primate. Program No. 126.5, *2010 Abstract Viewer/Itinerary Planner, Society for Neuroscience*.

G. Purushothaman\*, R. Marion\*, S. Walston\*, K. Li\*, D. Yampolsky\*, Y. Jiang\*, V. Casagrande (2011) Visual information processing in the absence of pulvinar input. *Journal of Vision* 11(11):171.

R. T. Marion\*, K. Li\*, G. Purushothaman\*, D. Yampolsky\*, Y. Jiang\*, J.M. Mavity-Hudson\* & V. A. Casagrande (2011) A quantitative comparison between geniculate axons in V1 and pulvinar axons in V2. Program No. 428.11, *Society for Neuroscience*.

G. Purushothaman\*, K. Li\*, R. T. Marion\*, D. Yampolsky\*, Y. Jiang\*, V.A. Casagrande (2011) Lateral Pulvinar and the salience of stimulus representation in primary visual cortex. Program No. 428.02, *Society for Neuroscience*.

K. Li\*, J. Patel\*, G. Purushothaman\*, R.T. Marion\*, D. Yampolsky\*, Y. Jiang\*, J.A. Mavity-Hudson\* & V. A. Casagrande (2011) Retinotopic organization of pulvinar in a prosimian primate. Program No. 269.20/HH29, *Society for Neuroscience*.

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