VITA OF RAY WINTERS

A. PERSONAL DATA

1. Address: Department of Psychology
University of Miami
Coral Gables, Florida 33124

B. EDUCATIONAL BACKGROUND

1.	B.S.	- 1964	Michigan State University; Psychology
2.	M.A.	- 1966	Michigan State University; Psychology
3.	Ph.D.	- 1969	Michigan State University; Psychology

C. PROFESSIONAL EXPERIENCE

1. Professor of Psychology
University of Miami 1979 to present

2. Associate Professor of Psychology
University of Miami 1974 to 1979

3. Assistant Professor of Psychology
University of Miami 1969 to 1974

4. Faculty Biomedical Engineering Department
University of Miami 1970 to present

5. Member, Laboratory of Quantitative Biology
Department of Biology
University of Miami 1969 to 1985

D. RESEARCH GRANTS

1. National Institute of Health, NHLBI Program Project (HL36588-05); Project 4 "CNS Modulation of Sympathetic Reactivity in Rabbits"
   Annual Support: $207,804 (7/1986 -7/1001)
   P.I. - Neil Schneiderman (continued)

2. NIH Grant R01 EY00701: Single cell recordings in cat optic tract; $98,000. (1978-1981)

3. NIH Grant R01 EY00701: Single cell recordings in cat optic tract; $142,000. (1975 - 1978)

4. NIH Grant R01 EY00701: Single cell recordings in cat optic tract; $154,000. (1974 - 1977)

5. NIH Grant R01 EY00701: Single cell recordings in cat optic tract; $40,000. (1971 - 1973)

6. NIH Institutional Grant to the University of Miami: $10,000 for laboratory equipment. (1969)

7. NSF Institutional Grant to the University of Miami: $10,000 for laboratory equipment. (1969)

E. PROFESSIONAL INTERESTS

Neural Basis of Behavior, Neurobiology of Bipolar Disorder and Depression, Behavioral Medicine, Electrophysiology of the Cardiovascular ,System, Psychophysiology of Anxiety, Electrophysiology of the Visual System.

F. COURSES TAUGHT

<u>Undergraduate</u>

1. Psychology 101: Psychology as Social Behavioral Science
2. Psychology 101: Honors: Psychology as Social Behavioral Science
3. Psychology 102: Psychology as Biological Behavioral Science
4. Psychology 102: Honors: Psychology as Biological Behavioral Science

5. Psychology 110: Introduction to Psychology

Courses Taught (continued)

6. Psychology 202: Introduction to Biological Psychology
7. Psychology 202: Honors: Introduction to Biological Psychology
8. Psychology 103: General Principles of Psychology

9. Psychology 402: Physiological Psychology
10. Psychology 403: Techniques in Physiological Psychology
11. Psychology 417: Emotion
11. Psychology 509: Perception
12. Psychology 481: Stress Management

Graduate

1. Biomed Eng. 502: Mechanisms of Neural Functioning Section
2. Psychology 605: Psychobiology
3. Psychology 612: Stress, Emotions, and Motivation
4. Psychology 614: Sensory Processes
5. Psychology 697: Seminar in Biological Psychology: Neuroanatomy
6. Psychology 694: Seminar in Perception
7. Psychology 676: Seminar in Behavioral Medicine: Stress and Stress Management

H. REFEREED JOURNAL ARTICLES

Johnson, S. L., Sandrow, D., Meyer, B., Winters, R., Miller, I., Keitner, G., & Solomon, D. (In press). Increases in manic symptoms following life events involving goal-attainment. *Journal of Abnormal Psychology*.

Paredes, J., Winters, R.W., Schneiderman, N., & McCabe (In press) Afferents to the central nucleus of the amygdala and functional subdivisions of the periaqueductal gray: Neuroanatomical substrates of affective behavior. Brain Research

Webber,T.J., Green, E.J., Winters, R.W., Schneiderman, N., and McCabe, P.M. (1999) Contribution of NMDA and non-NMDA receptors to synaptic transmission from the brachium of the inferior colliculus to the medial subdivision of the medial geniculate nucleus in the rabbit. Experimental Brain Research, 74, 221-235

Duan, Y.-F., Winters, R.W., McCabe, P.M., Green, E.J., Huang, Y., & Schneiderman, N. (1997). Cardiorespiratory components of defense reaction elicited from paraventricular nucleus. Physiology and Behavior, 6, no.2, 325-330.

Duan, Y.-F., Winters, R.W., McCabe, P.M., Green, E.J., Huang, Y., & Schneiderman, N. (1996). Functional relationship between the hypothalamic vigilance area and PAG vigilance area. Physiology and Behavior, 62(3), 675-679.

Duan, Y.-F., Winters, R.W., McCabe, P.M., Green, E.J., Huang, Y., & Schneiderman, N. (1996). Modulation of the baroreceptor reflex by stimulation of the hypothalamic

defense and vigilance areas. Physiology and Behavior, 59, 1093-1098.

Refereed Journal Articles (continued)

Duan, Y.-F., Winters, R.W., McCabe, P.M., Green, E.J., Huang, Y., & Schneiderman, N. (1996). Behavioral characteristics of defense and vigilance reactions elicited by electrical stimulation of the hypothalamus in rabbits. Behavioural Brain Research, 81, 33-41.

McEchron, M.D., Green, E.J., Winters, R.W., Nolen, T.G., Schneiderman, N., & McCabe, P.M.(1996). Changes in synaptic efficacy in the medial geniculate nucleus resulting from auditory classical conditioning. Journal of Neuroscience, 16, no.3, 1273-1283.

Duan Y.-F., Winters, R.W., McCabe, P.M., Green, E.J., Huang Y., & Schneiderman, N. (1994). Modulation of neuronal firing in the medullary solitary complex by electrical stimulation of the hypothalamic defense and vigilance areas in rabbits. Brain Research, 643, 218-226.

Duan Y.-F., Winters, R.W., McCabe, P.M., Green, E.J., & Schneiderman, N. (1994). Basal and reactive plasma catecholamine levels under stress and anesthesia in rabbits. Physiology and Behavior, 56, 577-583.

McCabe, P.M., Duan Y.-F., Winters, R.W., Green, E.J., Huang Y., & Schneiderman, N. (1994). Comparison of peripheral blood flow patterns associated with the defense reaction and the vigilance reaction in rabbits. Physiology and Behavior, 56, 1101-1106.

Winters, R. W., McCabe, P. M., Green, E. J., Duan, Y.-F., & Schneideman, N. (1991). Electrophysiological evidence for hypothalamic defense area input to cells in the lateral tegmental field of the medulla of rabbits. Brain Research, 558, 171-175.

Markgraf, C. G., Liskowsky, D. R., Winters, R. W., McCabe, P. M., Green, E. J., & Schneiderman, N. (1991). Hypothalamic, midbrain, and bulbar areas involved in the defense reaction in rabbits. Physiology and Behavior, 49, 493-550.

Peckerman, A., Saab, P. G., McCabe, P. M., Skyler, J. S., Winters, R. W., & Schneiderman, N. (1991). Cold pressor pain and cardiovascular reactivity during the forehead cold stimulation procedure. Psychophysiology, 28, 485-495.

Teich, A. H., McCabe, P. M., Gentile, C. G., Schneiderman, L. S., Winters, R. W., Liskowsky, D. R., & Schneiderman, N. (1989). Auditory cortex lesions prevent the extinction of Pavlovian differential heart rate conditioning to tonal stimuli in rabbits. Brain Research, 480, 210-218.

Haselton, J. R., Winters, R. W., Haselton, C. L., McCabe, P. M., & Schneiderman, N. (1988). Cardiovascular responses elicited by chemical stimulation of the rostral medullary raphe of the rabbit. Brain Research, 453, 167-175.

Haselton, J. R., Winters, R. W., Haselton, C. L., McCabe, P. M., & Schneiderman, N. (1988). Anatomical and functional connections for neurons of the rostral medullary raphe of the rabbit. Brain Research, 453, 176-182.

Refereed Journal Articles (continued)

Teich, A. H., McCabe, P. M., Gentile, C. G., Schneiderman, L., Winters, R. W., Liskowsky, D. R., & Schneiderman, N. (1988). Role of auditory cortex in the acquisition of differential heart rate conditioning. Physiology & Behavior, 44, 405-412.

Cohen, H. I., Winters, R. W., Robertson, T. W., & Christen, W. G. (1985). Comparison of signal and adaptive sensitivity profiles of the surround mechanism of cat retinal ganglion cells. Experimental Neurology, 87, 314-321.

Robertson, T. W., Christen, W. G., & Winters, R. W. (1985). Adaptative sensitivity of the surround mechanism of cat retinal ganglion cells. Experimental Brain Research, 54, 449-454.

Robertson, T. W., Christen, W. G., & Winters, R. W. (1983). Effect of target position and size on adaptive sensitivity of the surround response mechanism of cat retinal ganglion cells. Experientia, 39, 357-358.

Robertson, T. W., Christen, W. G., & Winters, R. W. (1983). Analysis of the adaptation fields of the surround response mechanism of cat retinal ganglion cells. Experimental Brain Research, 52, 351-362.

Schrima, L., Hartman, P., Anderson, J., Dandes, H., & Winters, R. (1983). The relationship of blood pressure and heart rate to narcolepsy and cataplexy. Sleep Research, 12, 231-236.

Cohen, H. I., & Winters, R. W. (1982). Spatial distribution of signal and adaptive sensitivity in the receptive field surrounds of cat retinal ganglion cells. Experientia, 38, 581-583.

Cohen, H. I., & Winters, R. W. (1981). Lateral spread of adaptation in the receptive field surrounds of cat retinal ganglion cells. Brain Research, 204, 194-199.

Cohen, H. I., & Winters, R. W. (1981). Spatial summation of signals and adaptation by the surround response mechanism of cat retinal ganglion cells. Experimental Brain Research, 44, 207-212.

Cohen, H. I., Winters, R. W., & Christen, W. G. (1981). Summing properties of the surround response mechanisms of cat retinal ganglion cells. Experientia, 37, 857-859.

Cohen, H. I., Winters, R. W., Hamasaki, D. I. (1980). Responses of X and Y cat retinal ganglion cells to moving stimuli. Experimental Brain Research, 38, 299-303.

Robertson, T. W., Winters, R. W., Christen, W. G., & Cohen, H. I. (1979). A comparison of on-inhibition and off-excitation measure of the surround response mechanism in cat retinal

ganglion cells. Brain Research, 160, 509-513.

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Christen, W. G., Cohen, H. I., Robertson, T. W., & Winters, R. W. (1979). Spatial distribution of the adaptation field of the surround response mechanism of type X cat retinal ganglion cells. Experientia, 35, 1073-1074.

Christen, W. G., Winters, R. W., Robertson, T. W., & Cohen, H. I. (1979). Effect of adapting target size on the gain of surround response mechanisms in X and Y cells in ca retina. Experientia, 35, 1350-1351.

Pollack, J. G., & Winters, R. W. (1978). A comparison of the strength of lateral inhibition in X and Y cells in the cat retina. Brain Research, 143, 538-543.

Pollack, J. G., & Winters, R. W. (1978). Effect of adaptation level on maintained firing and sensitivity in receptive field center of X and Y cells. Experientia, 34, 80-81.

Robertson, T. W., Winters, R. W., Christen, W. G., & Cohen, H. I. (1978). The effect of adapting target location on the gain of the surround mechanisms in cat retinal ganglion cells. Brain Research, 156, 360-363.

Winters, R. W., & Hamasaki, D. I. (1976). Temporal characteristics of peripheral inhibition of sustained transient ganglion cells in cat retina. Vision Research, 16, 37-45.

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Hamasaki, D. I., & Winters, R. W. (1974). A review of the properties of transient and sustained retinal ganglion cells. Experientia, 30, 713-719.

Winters, R. W. (1974). Some relationships between the psychophysics and neurophysiology of color vision. American Journal of Optometry and Physiological Optics, 51, 550-566.

Hamasaki, D. I., & Winters, R. W. (1973). Intensity-response functions of visually deprived LGN neurons of cats. Vision Research, 13, 925-936.

Winters, R. W., Hickey, T. L., & Pollack, J. G. (1973). Effect of variations of target location upon the peripheral responses of on-center retinal ganglion cells in the cat. Vision Research, 13, 1487-1498.

Winters, R. W., Hickey, T. L., & Skaer, D. H. (1973). Spatial summation in the receptive field periphery of two types of on-center neurons in cat retina. Vision Research, 13, 1499-1509.

Hickey, T. L., Winters, R. W., & Pollack, J. G. (1973). Center-surround interactions in two types of on-center retinal ganglion cells in the cat. Vision Research, 13, 1511-1526.

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Pollack, J. G., & Winters, R. W. (1973). The effect of adaptation level upon the responses of two types of on-center cells in the cat retina. British Journal of Physiological Optics, 28, 175-181.

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Winters, R. W., & Walters, J. W. (1970). Transient and steady state stimulus-response relationships for cat retinal ganglion cells. Vision Research, 10, 461-477.

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I. CHAPTERS

Winters, R.W., McCabe, P.M., and Schneiderman, N. (In press) Functionality and neurobiology of learned emotional responses. In J. Moore (Ed.), Neurobiology of conditioning and learning.

Johnson, S. L., Winters, R., & Meyer, B. (In press). The role of the social environment in bipolar disorder: A polarity-specific model. In Thomas Joiner (Ed.), A Festschrift for J. Hokanson. Washington, DC

Winters, R.W. & Schneiderman, N.(2000). Autonomic classical and operant conditioning. In N. J. Smelser & P.B. Bates (Eds), International Encyclopedia of the Social and Behavioral Sciences

Winters, R.W. and Schneiderman, (2000) N. Anxiety and coronary heart disease. In D.I. Mostofsky and D.H. Barlow (Eds.), The management of stress and anxiety in medical disorders. Needham Heights, MA: Allyn & Bacon.

Winters, R.W., McCabe, P.M., Green, E.J., and Schneiderman, N. (2000) Central nervous system circuitry underlying learned and unlearned affective responses to stressful stimuli. In In T. Field, N. Schneiderman, & P. M. McCabe (Eds.), Stress, Coping, and the Cardiovascular System Hillsdale, NJ: Lawrence Erlbaum Associates.

Chapters (continued)

Winters, R.W., Scott, W.D., and Beevers, C.G. (2000) Affective Distress as an organizing factor in depression: Neurobiological Mechanisms. In S. Johnson, A. Hayes, T. Field, N., P. M. McCabe, Schneiderman, & (Eds.), Stress, Coping and Depression. Hillsdale, NJ: Lawrence Erlbaum Associates.

Scott, W.D., Winters, R.W., and Beevers, C.G. (2000) Affective Distress as an organizing factor in depression: Psychological mechanisms. In S. Johnson, A. Hayes, T. Field, N., P. M. McCabe, Schneiderman, & (Eds.), Stress, Coping and Depression. Hillsdale, NJ: Lawrence Erlbaum Associates.

McCabe, P. M., Schneiderman, N., Jarrell, T. W., Gentile, C. G., Teich, A. H., Winters, R. W., & Liskowsky, D. R. (1995). Central pathways involved in classical differential conditioning of heart rate responses in rabbits. In I. Gormezano, & J. A. Harvey (Eds.), The neural substrates of learning. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Winters, R. W., Ironson, G. H., & Schneiderman, N. (1990). The Neurobiology of Anxiety. In R. H. Rosenman, & D. G. Byrne (Eds.), Anxiety and the heart. Washington, DC: Hemisphere Publishing Corp.

McCabe, P. M., Schneiderman, N., Winters, R. W., Gentile, C. G., & Teich, A. (1988). Learned aspects of cardiovascular regulation. In R. Ader, H. Weiner, & A. Baum (Eds.), Experimental foundations of behavioral medicine: Conditioning approaches. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Winters, R. W., & Anderson, J. B. (1985). Biological basis of behavior. In N. Schneiderman, & J. Tapp (Eds.), Behavioral medicine: A biopsychosocial approach. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Winters, R. W. (1985). Behavioral approaches to pain. In N. Schneiderman, & J. Tapp (Eds.), Behavioral medicine: A biopsychosocial approach. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Winters, R. W. (1985). Stress, arousal and sleep. In T. Field, N. Schneiderman, & P. M. McCabe (Eds.), Stress and coping. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Winters, R. W., (1974). Single cell coding in sensory systems. In J. Kline (Ed.), Unified Systems Approach to the Medical Sciences for Biomedical Engineers. Cambridge, MA: Little Brown.

J. ABSTRACTS

Johnson, S. L., Winters, R., & Meyer, B. (2000, June). *The Behavioral Activation System and Bipolar Disorder*. Presentation as part of symposium on "New directions in CBT Conceptualization and Treatment of Bipolar Disorder," Chair: Cory Newman, Ph.D. International Congress of Cognitive Psychotherapy, Catania, Italy.

Abstracts (continued)

Johnson, S.L., Winters, R.W., & Meyer, B. (2000) Predicting mania: The role of the behavioral activation system Emotion Research Group, Miami, Fl.

Katzen, H.L., Levin, B.E., Llabre, M.M., Rey, G.G., Winters, R.W., & McCabe, P.M. (2000). Lateralization of tremor, at disease onset exerts an effect on cognition in Parkinson's disease. Society for Neuroscience Abstracts, 25.

Sandrow, D. Johnson, S.L., Meyer, B., Winters, R.W. Miller, I., Keitner, & Solomon, D. Life events involving behavioral activation and manic symptoms. Association for the Advancement of Behavioral Therapy, Toronto.

Paredes, J.P., Green, E.J., Winters, Gonzales, J.R.W., McCabe, P.M and Schneiderman, N. (1998) Forebrain projections to the projections to the periaqueductal grey in the rabbit. Society for Neuroscience Abstracts, 24, 125.

McCabe, P.M., Schneiderman, N., Winters, R.W., Green, E.J., Duan, Y.-F., & McEchron, M.D. (1994) CNS inegration of cardiovascular and behavioral stress responses. International Congress of Behavioral Medicine Abstracts.

Duan Y.-F., McCabe, P.M., Winters, R.W., Ying Huang., Green, E.J., and Schneiderman, N. (1993). Vigilance reaction elicited by electrical stimulation of the midbrain periaqueductal gray and the hypothalamus may involve separate neural pathways in rabbits. Society for Neuroscience Abstracts,19, 1089.

Duan, Y.-F., Winters, R.W. McCabe, P.M., Green, E.J., Huang, Y. & Schneiderman, N. (1992) Modulation of the neuronal firing in the nucleus tractus solitarious by electrical stimulation of the hypothalamic defense and vigilance areas in rabbits. Society for Neuroscience Abstracts,18, 1188.

McCabe, P. M., Duan, Y.-F., Winters, R. W., Green, E. J., & Schneiderman, N. (1991). Hypothalamic defense area modulation of the baroreceptor reflex in rabbits. Society for Neuroscience Abstracts, 17, 997.

Winters, R. W., McCabe, P. M., Green, E. J., Duan, Y.-F., Huang, Y., Markgraf, C. G., & Schneiderman, N. (1990). Electrophysiological evidence for hypothalamic defense areas input to cells in the lateral tegmental field of the medulla in rababits. Society for Neuroscience.

Reineke, L. J., Saab, P. G., Schneiderman, N., & Winters, R. W. (1990). Changes in casual blood pressure as a pedictor of laboratory stress responses. Society of Behavioral Medicine.

McCabe, P. M., Hitchcock, J. M., Markgraf, C. G., Tucker, M. A., Winters, R. W., & Schneiderman, N. (1989). Spinal trigeminal projections to the magnocellular region of the medial geniculate nucleus in rabbits. Society for Neuroscience Abstracts, 15, 888.

Abstracts (continued)

Markgraf, C. G., Winters, R. W., McCabe, P. M., Duan, Y-F., & Schneiderman, N. (1989). Cardiorespiratory responses to electrical stimulation of the dorsomedial hypothalamus of the rabbit. Society for Neuroscience Abstracts, 19.

McCabe, P. M., Markgraf, C. G., Quetel, J. A., Liskowsky, D. R., Winters, R. W., & Schneiderman, N. (1988). Afferent connections of magnocellular region of the geniculate nucleus in the rabbit. Society for Neuroscience Abstracts, 14.

Gentile, C. G., Markgraf, C. G., McCabe, P. M., Liskowsky, D. R., Winters, R. W., & Schneiderman, N. (1988). Subcortical afferent connections of the amygdaloid central nucleus in rabbits. Society of Neuroscience Abstracts, 14.

Schneiderman, N., Markgraf, C. G., McCabe, P. M., Liskowsky, D. R., & Winters, R. (1988). Ibotenic acid lesions in the magnocellular medial geniculate nucleus prevent the acquisition of classically conditioned bradycardia to single tones in rabbits. Society for Neuroscience Abstracts, 14.

Markgraf, C. G., Liskowsky, D. R., McCabe, P. M., Winters, R. W., & Schneiderman, N. (1988). Cardiorespiratory, plasma catecholamine, and behavioral responses from stimulation of the periaqueductal grey region in the rabbit. Society for Neuroscience Abstracts, 14.

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Teich, A. H., McCabe, P. M., Gentile, C. G., Winters, R. W., Liskowsky, D. R., & Schneiderman, N. (1987). Auditory cortex lesions disrupt differential bradycardiac conditioning to tonal stimluli in rabbits. Society for Neuroscience Abstracts, 13.

Liskowsky, D. R., Winters, R. W., McCabe, P. M., & Schneiderman, N. (1987). Connections between cardiovascularly related areas in the hypothalamus and the periacqueductal gray region in rabbits. Society for Neuroscience Abstracts, 13.

Schrima, L., Hartman, P., & Winters, R. (1984). Cataplexy related to blood pressure and heart rate. Annual meeting of the Society for Neuroscience.

Robertson, T. W., Winters, R. W., Christen, W., & Cohen, H. (1979). Comparison of two response measures of surround inhibition in X an Y cells in cat retina. Annual meeting of the Society for Neuroscience.

Christen, W., Winters, R. W., Robertson, T. W., & Cohen, H. (1978). Adaptation field of the surround mechanism in X and Y cells in cat retina. Annual meeting of the Association for Research in Vision and Ophthalmology.

Abstracts (continued)

Cohen, H., Winters, R. W., & Hamasaki, D. I. (1977). Response of Type X and Type Y cells to moving targets. Annual meeting of the Association for Research in Vision and Ophthalmology.

Christen, W., & Winters, R. W. (1976). Spatial distribution of surround inhibition in X cells in cat retina. Annual meeting of the Association for Research in Vision and Ophthalmology.

Winters, R. W., & Hamasaki, D. I. (1975). Temporal properties of surround inhibition in X and Y retinal ganglion cells in the cat. Presented at the annual meeting of Neurosciences Society, New York.

Pollack, J. G., & Winters, R. W. (1975). Quantitative characteristics of lateral inhibition in transient and sustained retinal ganglion cells in cat. Annual meeting of Neurosciences Society, New York, November.

Winters, R. W., Hickey, T. L., & Skaer, D. H. (1972). Characteristics of surround responses in single retinal ganglion cells in the cat. Presented at the annual meeting of the Association for Research in Vision and Ophthalmology, Sarasota.

Winters, R. W., & Hamasaki, D. I. (1971). Transformation of luminance information in cat lateral geniculate nucleus. Presented at the annual meeting of the Association for Research in Vision and Ophthalmology, Sarasota.

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Winters, R. W., & Hamsaski, D. I. (1970). Comparison of intensity response relationships for cat optic tract and lateral geniculate neurons. Presented at the annual meeting of the Optical Society of America, Hollywood, Florida.

Winters, R. W., & Hamasaki, D. I. (1970). Intensity-response relationships for lateral geniculate neurons of the cat. Presented at the annual meeting of the American Academy of Optometry, Miami Beach, Florida.

K. EDITORIAL DUTIES

Editorial Consultant: *Brain Research*
Experimental Brain Research
Vision Research

L. SERVICE

Undergraduate Committee for Psychology
Admissions and Academic Standards Committee
Sabbatical Leave Committee
Tenure and Promotion Committee for College of Arts and Sciences

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