

## Curriculum Vitae

### J. Galen Buckwalter, Ph.D.

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#### Current Positions:

- 2009-Present Research Scientist, Institute for Creative Technologies, University of Southern California, Marina del Rey, CA  
Collaborating with the Director to develop a virtual human-based program to assist returning service members and their families to break down the barriers to obtaining mental health care. Also exploring the potential of using virtual environments to develop stress resilience among service members prior to deployment.
- 2008 – Present Director of Research, Headington Institute, Pasadena, CA  
Developing a research program for an established not for profit organization that provides clinical and assessment services for humanitarian workers located across the world. Focus on the role resilience plays in the development of successful humanitarian workers.

#### Past Positions:

- 1997 – 2007 Research Consultant to Vice President of Research and Development to Chief Scientist, eHarmony.com, Pasadena, CA  
Designed and conducted research to validate all assessment instruments and matching models for this highly successful online relationship matching company. Validated linear and non-linear statistical matching models. Developed an active Research and Development department of 7 PhD's. Supervised all research staff. Implemented process to validate models for matching in International markets.
- 2002 – 2004 Director of Research, Southern California Kaiser Permanente Medical Group, Department of Research and Evaluation, Pasadena, CA  
Supervised five Senior Research Scientists in the development of their research programs. Provided support for the Director in furthering the national and international reputation of the Department as a leader in Behavioral and Outcomes Research. Conducted an active program of federally funded research program on the impact of steroidal hormones on cognition and on the advanced assessment of cognition. Work to advance research projects with physicians.
- 2000 - 2002 Senior Research Scientist, Southern California Kaiser Permanente Medical Group, Department of Research and Evaluation, Pasadena, CA  
Acquired research funding and directed studies. Conducted a population-based study of the effects of hormone replacement on the incidence and prevalence of Alzheimer's disease. Developed screening instruments for the assessment of cognition in the elderly. Provided consultation to physicians.
- 1998 - 1999 Resource Utilization Coordinator, Administrative Core, Alzheimer's Disease Research Center, University of Southern California, Los Angeles, CA

- Developed and implemented Center-wide procedures for dissemination of data and other resources. Formalized procedures for collaborative research. Supervised data management system. Provided statistical consultation.
- 1992 - 1999 Associate Director, Clinical Core, Alzheimer's Disease Research Center, University of Southern California, Los Angeles, CA  
Coordinated research efforts using data from the Clinical Core. Provide administrative support for the Director. Develop independent research projects with an emphasis on the neuropsychological effects of various hormonal states.
- 1993 - 1999 Research Assistant Professor, Ethel Percy Andrus Gerontology Center, University of Southern California, Los Angeles, CA  
Supervised students in directed research studies. Taught courses on the psychology of aging. Developed Master's level course on the psychology of aging that was taught over the web. Frequent public speaker in support of the Center.
- 1991 - 1992 Research Associate, Clinical Core, Alzheimer's Disease Research Center, University of Southern California, Los Angeles, CA  
Supervised training in neuropsychological assessment. Coordinated data verification process. Wrote manuscripts. Provided data management and statistical support for senior researchers.
- 1989 - 2000 Adjunct Professor, Graduate School of Psychology, Fuller Theological Seminary, Pasadena CA  
Taught statistics sequence. Served as Dissertation Chair for 14 Ph.D. students.
- 1986 - 1991 Biostatistician, Huntington Medical Research Institutes, Pasadena, CA  
Assisted senior research scientists in design and analysis. Developed data management system for clinical trials.
- 1983 - 1989 Graduate Research Assistant, Graduate School of Psychology, Fuller Theological Seminary, Pasadena, CA  
Assisted doctoral candidates with design and analysis for dissertation research. Primary design consultant for over 100 doctoral level projects.
- 1987 - 1989 Psychological Assistant, Betsy Bisno, Ph.D., Beverly Hills, CA  
Long- and short-term psychotherapy with children and adults.
- 1985 - 1987 Psychological Assistant, Victor C. Sanchez, Ph.D., Pasadena, CA  
Neuropsychological assessments and short-term psychotherapy.
- 1985 - 1987 Research Assistant, Anxiety Disorders Clinic, Los Angeles County/University of Southern California Medical Center, Outpatient Psychiatric Clinic, Los Angeles, CA  
Provided database management and statistical analysis for a clinical trial of a psychoactive medication.

### **Committee Memberships:**

- 2010 – Present Member, National Board of Medical Examiners.  
Participate in the development and review of the National Board for all medical students.
- 2002 - Present Member, Fuller Theological Seminary, Graduate School of Psychology, Human Subjects Review Committee.  
Participate in the review of all research projects conducted by faculty and students at Fuller Theological Seminary, Graduate School of Psychology.
- 1999 - Present Member, NIMH Study Section, BBBP-1 (10), Center for Scientific Review, National Institutes of Health, Washington, DC. Review SBIR and STTR proposals submitted to NIMH for scientific merit.

1998 - 2004      Member, Southern California Kaiser Permanente Institutional Review Board, Kaiser Permanente, Pasadena, CA  
Participate in the review of all research projects utilizing members of the Southern California Kaiser Permanente Health Care Plan. Certified IRB Professional by the Council for Certification of IRB Professionals (12/2002).

**Research Interests:**    Test development (personality, cognitive, computerized)  
Impact of personality on relationship, job, and personal satisfaction  
Effect of disability on medical care  
Cognitive aging  
Short- and long-term effects of hormonal exposures on cognition and mood

**Education:**

1989                      Ph.D.    Clinical Psychology  
Graduate School of Psychology, Fuller Theological Seminary, Pasadena, CA  
(APA approved)  
Dissertation: Neuropsychological Factors Affecting Survival in Malignant Glioma Patients Treated with Autologous Stimulated Lymphocytes.

1986                      M.A.    Theology  
Fuller Theological Seminary  
Pasadena, CA

1980                      B.S.    Social Work  
Edinboro University of Pennsylvania  
Edinboro, PA

**Peer Reviewed Publications:**

In press

Carter SR, **Buckwalter JG**. (in press). Enhancing mate selection through the internet: A comparison of relationship quality between marriages arising from an online matchmaking system and marriages arising from unfettered selection. *InterPersona*

Rizzo, A.A., Parsons, T., Buckwalter, J.G. & Kenny, P. (in press). The Birth of Intelligent Virtual Patients in Clinical Training. *The Behavioral Scientist*.

2009

Dutton WH, Helpser EJ, Whitty MT, Li N, **Buckwalter JG**, Lee E. The Role of the Internet in Reconfiguring Marriages: A Cross-national Study (2009). *InterPersona* 3:51-59.

2008

Petitti, Diana B, Crooks VC, Chiu V, **Buckwalter, JG**, Chui, HC. Incidence of dementia in long-term hormone users. *American Journal of Epidemiology*. 2008;167(6):692-700.

Hallam BJ, Brown WS, Ross C, **Buckwalter JG**, Bigler E, Tschanz JT, Norton MC, Welsh-Bohmer KA, Breitner JCS. Regional atrophy of the corpus callosum in dementia. *J International Neuropsychol Soc* 2008, 14 : 414-423

Dutton WH, Helpser EJ, Whitty MT, **Buckwalter G** and Lee, E. Mate Selection in the Network Society: The Role of the Internet in Reconfiguring Marriages in Australia, the United Kingdom and United States 2008). Available at SSRN: <http://ssrn.com/abstract=1275810>

## 2007

- Luetters C, Huang M-H, Seeman T, **Buckwalter G**, Meyer P, Avis P, Sternfeld B, Johnston J, Greendale G. Menopause Transition Stage and Endogenous Estradiol and Follicle-Stimulating Hormone Levels are Not Related to Cognitive Performance: Cross-Sectional Results from the Study of Women's Health across the Nation (SWAN) *Journal of Women's Health*. 2007, 16(3): 331-344
- Parsons, TD, Bowerly, T, **Buckwalter, JG**, & Rizzo, AA. A controlled clinical comparison of attention performance in children with ADHD in a virtual reality classroom compared to standard neuropsychological methods. *Child Neuropsychology*. 2007 13(4):363-81
- Buckwalter JG**. The good patient. *New England J Medicine* 2007; 357:2534-2535

## 2006

- Crooks VC, Petitti DB, Robins SB, **Buckwalter JG**. Cognitive Domains Associated with Performance on the Telephone Interview of Cognitive Status – Modified *American Journal of Alzheimer's Disease and Other Dementias* 2006;21:45-53.
- Rizzo AA, Bowerly T, **Buckwalter JG**, Klimchuk D, Mitura R, Parsons TD. A virtual reality scenario for all seasons: the virtual classroom. *CNS Spectrums* 2006; 11: 35-44.
- Parsons TD, Kratz KM, Thompson E, Stanczyk FZ, **Buckwalter JG**. DHEA supplementation and cognition in postmenopausal women. *Int J Neurosci*. 2006 Feb;116(2):141-55.
- Huang, Mei-Hua Luetters C, **Buckwalter JG**, Seeman T, Gold EB, Sternfeld B, Greendale G A. Dietary genistein intake and cognitive performance in a multiethnic cohort of midlife women. *Menopause* 2006;13:621-630

## 2005

- Parsons TD, Rizzo AA, van der Zaag C, McGee JS **Buckwalter JG**. Gender differences and cognition among older adults. *Aging, Neuropsychol Cognition* 2005;12:78-88.
- Crooks VC, **Buckwalter JG**, Petitti DB, Brody KL, Yep RL. Self-reported severe memory problems as a screen for cognitive impairment and dementia *Dementia* 2005;4:539-551
- Petitti DB, Crooks VC, **Buckwalter JG**, Chiu V. Blood pressure levels before dementia. *Arch Neurol*. 2005;62:112-116.
- Lukacz ES, Lawrence JM, **Buckwalter JG**, Burchette JG, Nager CW, Lubner KM. Epidemiology of prolapse and incontinence questionnaire: validation of a new epidemiologic survey. *Internat Urogynecology J*. 2005;15: 272 – 284.
- Buckwalter JG**, Crooks VC, Petitti DB. Cognitive performance of older women who have survived cancer. *J Neurosci* 2005;115:1307-1314.

## 2004

- Lukacz, ES, Nager CW, Lawrence JM, Lubner KM, **Buckwalter JG**. The use of visual analog scales in urogynecologic research: a psychometric evaluation. *Am J Obstet Gynecol* 2004; 191:165-70
- Chodosh J, Petitti D.B, Elliott M, Hays R.D, Crooks V.C, Reuben D.B, **Buckwalter JG**, Wenger N. Physician Recognition of Cognitive Impairment: Evaluating the Need for Improvement. *J Amer Geriatr Soc* 2004;57:1051-1059.
- Parsons TD, Rizzo AA, **Buckwalter JG**. Backpropagation and regression: comparative utility for neuropsychologists *J Clin Exper Neuropsychol* 2004;26:95-104
- Buckwalter JG**, Crooks VC, Robins SB, Petitti DB. Hormone use and cognitive performance in women of advanced age. *J Amer Geriatr Soc* 2004;52:182-186.
- Parsons TD, Larson P, Kratz K, Thieboux M, Bluestein B, **Buckwalter JG**, Rizzo AA. Sex differences in mental rotation and spatial rotation in a virtual environment *Neuropsychologia* 2004;42:555-562.
- Chodosh J, **Buckwalter JG**, Blazer DG, Seeman TE. How the question is asked makes a difference in the assessment of depressive symptoms in older persons. *Am J Geriatr Psychiatry* 2004;12:75-83.
- Rizzo, A.A., Klimchuk, D., Mitura, R., Bowerly, T., Shahabi, C. & **Buckwalter JG**. (2004). Diagnosing attention disorders in a virtual classroom. *IEEE Computer*. 37 (5), 87-89.
- Rizzo, A.A., **Buckwalter JG**., Bowerly, T., Yeh, S., Hwang, J., Thieboux, M. & Kim, G.J. (2004).

- Virtual reality applications for assessment and rehabilitation of cognitive and motor processes. *Proceedings of the 15<sup>th</sup> Congress of the International Society of Electrophysiology & Kinesiology*.54.
- Rizzo, A.A., Bowerly, T., **Buckwalter JG.**, Shahabi, C. & Sharifzadeh, M. (2004). Results and future developments from a virtual reality classroom for assessing attention processes in children with ADHD. *Biological Psychiatry*. 55:1S, 175.
- Parsons, T.D., Thompson, E., Buckwalter, D.K., Bluestein, B.W., Rankin, K.P., Stanczyk, F., & **Buckwalter, J.G.** (2004). Pregnancy History and Cognition During and After Pregnancy. *The International Journal of Neuroscience*, 114. 1099-1110.

### 2003

- Reger, G. M., McGee, J. S., Rizzo, A. A., **Buckwalter, J. G.**, van der Zaag, C., & Thiebeaux, M. A 3D virtual environment rod and frame test: the reliability and validity of 4 traditional scoring methods for older adults. *J Clin Exper Neuropsychol* 2003;25:1169-1177
- Buckwalter JG**, Petitti DB, Crooks VC. Estrogen replacement and risk of Alzheimer disease. *JAMA*. 2003;289(9):1101.
- Rankin KP, Kochamba G, Boone KB, Petitti DB, **Buckwalter JG**. Presurgical cognitive deficits in patients receiving coronary artery bypass graft surgery. *J Inter Neuropsych Soc* 2003;9:913-924.
- Crooks VC, **Buckwalter JG**, Petitti DB: Diabetes Mellitus and cognitive performance in older women. *Annals of Epidemiology*, 2003;13:613-619.

### 2002

- Buckwalter JG**, Crooks VC, Petitti DB. A psychometric analysis of a computer assisted administration of the Telephone Interview of Cognitive Status – Modified. *J Clin Experimental Neuropsychology* 2002;24:169-175.
- Cherry BJ. **Buckwalter JG**. Henderson VW. Better preservation of memory span relative to supraspan immediate recall in Alzheimer's disease. *Neuropsychologia*. 2002;40:846-52.
- Buckwalter JG**, Simpson SW. Psychological factors in the etiology and treatment of severe nausea and vomiting in pregnancy. *Am J Obstet Gynecol* 2002;186:S210-S217.
- Petitti DB, **Buckwalter JG**, Crooks VC, Chiu V. Prevalence of dementia in users of hormone replacement therapy defined using prescription data. *J Gerontol: Med Sci* 2002;57A:M532-M538.
- Castellani B, Wedgeworth R, **Buckwalter JG**, Bartlett G, Taber B, Wear D. Do clinical faculty endorse preparation for today's changing healthcare system? *J Managed Care Medicine* 2002;6:28-31.

### 2001

- Buckwalter JG**. Buckwalter DK. Bluestein BW. Stanczyk FZ. Pregnancy and post partum: changes in cognition and mood. *Progress in Brain Research*. 2001;133:303-319.
- Smith, R., Musleh, W., Akopian, W., **Buckwalter, G.** and Walsh, J.P. Regional differences in the expression of corticostriatal synaptic plasticity, *Neurosci*. 2001;106:95-101.
- Bhasin S, Buckwalter JG. Testosterone supplementation in older men: a rational idea whose time has not yet come. *J Andrology* 2001;22:718-731.
- Simpson SW, Goodwin TM, Robins SA, Rizzo AA, Howes RA, Buckwalter DK, **Buckwalter JG**. Psychological factors and hyperemesis gravidarum. *J Women's Health Gender-Based Med*. 2001;5:471-477.
- Reznick D, **Buckwalter G**, Groff J, Elder D. The evolution of senescence in natural populations of guppies (*Poecilia reticulata*): a comparative approach. *Exper Gerontol* 36;791-812.
- Rizzo AA, **Buckwalter JG** (Guest Editors). Introduction to the theme issue on virtual environments for clinical neuropsychology . *Presence: Teleoperators and Virtual Environments*. 2001;10:3-5.
- Rizzo AA, **Buckwalter JG**, Bowerly T, McGee J, van Rooyen A, van der Zaag C, Neumann U, Thiebaux M, Kim L, Pair J, Chua C. Virtual environments for assessing and rehabilitating Cognitive/functional performance: a review of project's at the USC Integrated Media Systems Center. *Presence: Teleoperators and Virtual Environments*. Vol. 2001;10: 359-374.

## 2000

- Drake EB, Henderson VW, Stanczyk FZ, McCleary CA, Brown WS, Smith CA, Rizzo AA, Murdock GA, **Buckwalter JG**. Associations between circulating sex steroid hormones and cognition in normal elderly women. *Neurology* 2000;54:599-602.
- Smith CA, **Buckwalter JG**, Murdock GA, McCleary CA, Henderson VW. Anosognosia and Alzheimer's disease: the role of depression in moderating impaired insight. *J Clin Experimental Neuropsychology* 2000;22:437-444.
- McPherson S, **Buckwalter JG**, Betz B, Tingus K, Back C. Satz-Mogel version of the Wechsler Adult Intelligence Scale -Revised: a re-analysis. *J Clin Experimental Neuropsychology* 2000;22:545-553.
- Rorty M, Yager J, **Buckwalter JG**, Rossotto E, Guthrie D. Development and validation of the Parental Intrusiveness Rating Scale among bulimic and comparison women. *Inter J Eating Disorders*. 2000;28:188-201.
- Rorty M, Yager J, Rossotto E, **Buckwalter G**. Parental intrusiveness in adolescence recalled by women with a history of bulimia nervosa and comparison women. *Inter J Eating Disorders* 2000;28:202-208.
- Rizzo AA, **Buckwalter JG**, Humphrey L, van der Zaag C, Bowerly T, Chua C, Neumann U, Kyriakakis C, van Rooyen A, Sisemore D. The Virtual Classroom: a virtual environment for the assessment and rehabilitation of attention deficits. *CyberPsychology and Behavior*. 2000;3:483-499.
- McGee JS, van der Zaag C, Rizzo AA, **Buckwalter JG**, Neumann U, Thieboux M. Issues for the assessment of visuospatial skills in older adults using virtual environment technology, *CyberPsychology and Behavior* 2000;3:469-482.

## 1999

- Buckwalter JG**, Stanczyk FZ, McCleary CA, Bluestein BW, Buckwalter DK, Rankin KP, Chang L, Goodwin TM. Pregnancy, the postpartum and steroid hormones: effects on cognition and mood *Psychoneuroendocrinology* 1999;24:69-84.
- Bretsky PM, **Buckwalter JG**, Seeman TE, Miller CA, Poirier J, Schellenberg GD, Finch CE, Henderson VW. Evidence for an interaction between apolipoprotein E genotype, gender, and Alzheimer disease. *Alzheimer Disease Associated Disorders*. 1999;13:216-221.
- Larson P, Rizzo AA, **Buckwalter JG**, van Rooyen A, Kratz K, Neumann U, Kesselman C, Thieboux M, van der Zaag C. Gender issues in the use of virtual environments. *Cyberpsychology and Behavior* 1999;2:113-123.
- Rizzo AA, **Buckwalter JG**, Neumann U, Chuba C, van Rooyen A, Larson P, Kratz K, Kesselman C, Thieboux M, Humphrey L. Virtual environments for targeting cognitive processes: an overview of projects at the University of Southern California. *Cyberpsychology and Behavior* 1999;2:89-100.
- McPherson S, Back C, **Buckwalter JG**, Cummings JE. Gender-related cognitive deficits in Alzheimer's disease and vascular dementia. *International Psychogeriatrics* 1999;11:117-122.
- Smith CA, Murdock GA, McCleary CA, Wilshire T, Buckwalter DK, Bretsky P, Marmol L, Gorsuch RL, **Buckwalter JG**. Lifelong estrogen exposure and cognitive performance. *Brain and Cognition* 1999;23:203-218.
- Rorty M, Yager J, **Buckwalter JG**, Rossotto E. Social support, social adjustment, and recovery status in bulimia nervosa. *Int J Eating Disorders*. 1999;26:1-12.

## 1998

- Rizzo AA, **Buckwalter JG**, Neumann U, Kesselman C, Thieboux M. Basic issues in the application of virtual reality for the assessment and rehabilitation of cognitive impairments and functional disabilities. *Cyberpsychology and Behavior* 1998;1:5-9-78.

#### 1997

- Rizzo AA, **Buckwalter JG**. Virtual reality and cognitive rehabilitation: a brief review of the future. *J Head Trauma Rehab* 1997;12:1-15.
- Ou X, **Buckwalter G**, McNeill TH, Walsh JP. Age-related change in short-term synaptic plasticity intrinsic to excitatory striatal synapses. *Synapse* 1997;27:57-68.
- Kopyov O, Jacques D, Duma C, **Buckwalter G**, Kopyov A, Lieberman A, Copcutt B. Microelectrode-guided medial posteroventral radiofrequency pallidotomy for Parkinson's disease provides symptom relief with few adverse effects. *J Neurosurg* 1997;87:52-59.
- Buckwalter JG**, Henderson VW, Schneider LS, Wilshire TW, Sobel E, Dunn ME. Body weight and cognitive functioning in Alzheimer's disease. *Arch Gerontol Geriatr.* 1997;24:261-267.

#### 1996

- Buckwalter JG**, Rizzo AA, McCleary R, Shankle R, Dick M, Henderson VW. Gender comparisons of cognitive performances among vascular dementia, Alzheimer's disease, and non-demented older adults. *Arch Neurol* 1996;53:436-439.
- McCleary R, Dick MB, **Buckwalter JG**, Henderson VW, Shankle WR. Full-information models for multiple psychometric tests: annualized rates of change in normal aging and dementia. *Alzheimer's Disease and Related Disorders.* 1996;10:216-223.
- Dunia R, **Buckwalter G**, DeFazio T, Villar F, McNeill TH, Walsh JP. Decreased duration of calcium potentials in striatal neurons from aged rats. *J Neurophysiol* 1996;76:2353-2363.
- Henderson VW, Watt L, **Buckwalter JG**. Cognitive skills associated with estrogen replacement in women with Alzheimer's disease. *Psychoneuroendocrinol* 1996;21:421-430.
- Cherry BJ, **Buckwalter JG**, Henderson VW. Memory span procedures in Alzheimer's disease. *Neuropsychology* 1996;10:286-293.

#### 1995

- Pegolo G, **Buckwalter JG**, Weiss M, Hinton DR. Pituitary adenomas: Correlation of cytologic features and biologic behavior. *Acta Cytologica* 1995;39:887-892.
- Sobel E, Davanipour Z, Sulkava R, Erkinjuntti T, Wikstrom J, Henderson VW, **Buckwalter G**, Bowman JD, Lee, P-J. Occupations with exposures to electromagnetic fields: a possible risk factor for Alzheimer's disease. *Am J Epidemiol.* 1995;142:515-524.
- Carmel R, Gott PS, Waters CH, Cairo K, Bondareff W, Cummings JL, **Buckwalter JG**, Henderson VW. Low cobalamin levels in patients with dementia. *Eur J Haematol.* 1995;54:245-253.

#### 1994

- Schuler CE, Snibbe J, **Buckwalter JG**. The validity of the Minnesota Multiphasic Personality Inventory Personality Disorder Scales. *Journal of Clinical Psychology,* 1994;50:220-227.
- Henderson VW & **Buckwalter JG**. Cognitive deficits of men and women with Alzheimer's Disease. *Neurology,* 1994;44:90-96.
- Henderson VW, Paganini-Hill A, Emanuel CK, Dunn ME, **Buckwalter JG**. Estrogen replacement therapy in older women: Comparisons between Alzheimer's disease cases and nondemented controls. *Archives of Neurology,* 1994;51:896-900.

#### 1993 and earlier

- Buckwalter JG**, Sobel E, Dunn ME, Diz MM, Henderson VW. Gender differences on a brief measure of cognitive functioning in Alzheimer's disease. *Archives of Neurology,* 1993;50:757-760.
- Henderson VW, **Buckwalter JG**, Sobel E, Diz MM, Freed DM. The agraphia of Alzheimer's disease. *Neurology,* 1992;42:776-784.
- Ingram M, **Buckwalter JG**, Jacques DB, Freshwater DB, Abts R, Techy G, Miyagi K, Sheldon H. Immunotherapy of malignant glioma: an interim report on survival. *Neurological Research,* 1990;12:265-273.

- Munjack DJ, Baltazar PL, DeQuattro V, Sobin P, Palmer R, Zulueta A, Crocker B, Usigli R, **Buckwalter JG**, Leonard M. Generalized anxiety disorder: some biochemical aspects. *Psychiatry Research*, 1990;32;35-43.
- Munjack DJ, Usigli R, Zulueta A, Crocker B, Adatia N, **Buckwalter JG**, Baltazar P, Kurvinck W, Inglove H, Kelly R, Leonard M. Nortriptyline in the treatment of panic disorder and agoraphobia with panic attacks. *Journal of Clinical Psychopharmacology*, 1988;8;204-207.

### **Book Chapters:**

- Rizzo AA, Bowerly T, **Buckwalter JG**, Schultheis MT, Matheis R, Shahabi C, Neumann U, Kim L, Sharifzadeh M. Virtual environments for the assessment of attention and memory processes: the virtual classroom and office. *Proceedings of The 4<sup>th</sup> International Conference on Disability, Virtual Reality and Associated Technology*. Veszprém, Hungary. 2002;3-12.
- Rizzo AA, **Buckwalter JG**, van der Zaag C. Virtual environment applications for neuropsychological assessment and rehabilitation. In Stanney, K. (Ed.) *Handbook of Virtual Environments*. L.A. Earlbaum: New York. 2002;pp. 1027-1064.
- Rizzo AA, **Buckwalter JG**, Schultheis MT, Neumann U, Bowerly T, Kim L, Thieboux M, Chua, C. Virtual reality for persons with central nervous system dysfunction: assessment and treatment in the Information Society for all. In: Stephanidis, C. (ed.) *Universal Access in Human Computer Interaction: Towards an Information Society for All*. L.A. Erlbaum: New York. Vol. 3. 2001;pp. 972-976.
- Rizzo AA, **Buckwalter JG**. Virtual reality and cognitive assessment and rehabilitation: the state of the art. In Psychoneurophysiological assessment and rehabilitation in virtual environments: cognitive, clinical and human factors in advanced human computer interactions. (ed G Riva). IOS Press: Amsterdam.
- Rizzo AA, Wiederhold MD, **Buckwalter JG**. Basic issues in the use of virtual environments for mental health applications. In *Virtual Environments in Clinical Psychology and Neuroscience*. (eds G. Riva, BK Wiederhold, E Molinari). Amsterdam, IOS Press. 1998;21-42.
- Buckwalter JG**, Henderson VW. Estrogen across the lifespan and Alzheimer's disease. In *Women's Health and Menopause: Risk Reduction Strategies*. Dordrecht, Netherlands, Kluwer Academic Publishers. 1997;185-190.
- Buckwalter JG**, Rizzo AA. Virtual reality and neuropsychological assessment of persons with neurologically based cognitive impairments. In *Technology and Informatics: Medicine Meets Virtual Reality* (eds KS Morgan, HM Hoffman, D Stredney, SJ Weghorst). Amsterdam, IOS Press;1997:17-21.
- Rizzo AA, **Buckwalter JG**. Virtual reality and cognitive assessment and rehabilitation: the state of the art. In *Virtual Reality in Neuropsychophysiology*. (ed G Riva). Amsterdam, IOS Press;1997:123-146.
- Rizzo AA, **Buckwalter JG**. The status of virtual reality for the cognitive rehabilitation of persons with neurological disorders and acquired brain injury. In *Technology and Informatics: Medicine Meets Virtual Reality* (eds KS Morgan, HM Hoffman, D Stredney, SJ Weghorst). Amsterdam, IOS Press;1997:22-33.



## Published Abstracts:

- Chodosh J, Petitti DB, Elliott M, Hays RD, Crooks VC, Buckwalter JG, Reuben DB, Wenger N. Physicians' confidence and attitudes are barriers to geriatric assessment. American Geriatrics Society, May 19th 2004
- Caolile J, Arnold JG, **Buckwater JG**, McPherson S. Theory of mind, empathy and insight in Alzheimer's disease. *J Inter Neuropsychol Soc.* 2003;9:174.
- Buckwalter JG**, Crooks VC, Robins Sb, Petitti DB. Associations between a cognitive screening test and a battery of neuropsychological tests. *J Inter Neuropsychol Soc.* 2003;9:243.
- Keuning A, Clason C, Hopkins R, **Buckwalter JG**, Brown WS. Carbon monoxide poisoning, cognitive performance and callosal morphology. *J Inter Neuropsychol Soc.* 2003;9:262.
- Amano S, **Buckwalter JG**, Tingus K, McPherson S. Cognitive effects of estrogen replacement therapy in post-menopausal women. *J Inter Neuropsychol Soc.* 2003;9:301.
- Arnold JG, Caolile J, **Buckwater JG**, McPherson S. Association between apathy and executive dysfunction in Alzheimer's disease. *J Inter Neuropsychol Soc.* 2003;9:315.
- Ross B, Hallam B, **Buckwalter JG**, Bigler E, Brown WS. Regional callosal changes in 3 forms of dementia. *J Inter Neuropsychol Soc.* 2003;9:317.
- Bowerly T, Rizzo AA, **Buckwalter G.**, Kim L, Shahabi C, Neumann U., Pair L, Humphrey L. A virtual classroom for assessing Attention Deficit Hyperactivity Disorder. *J Inter Neuropsychol Soc.* 2003;9:152.
- Parsons TD, Rizzo AA, McGee , **Buckwalter, J.G.** Gender differences and cross-uncrossed differences in a virtual environment. *J Inter Neuropsychol Soc* 2003;.:223.
- McGee JS, Reger GM, Rizzo AA, Thiebaut M, van der Zaag CD, **Buckwalter JG**. The Virtual Environment Visuospatial System: gender differences in older adults. *J Inter Neuropsychol Soc.*2002;8:220.
- Reger G.M, McGee JS, **Buckwalter JG**, Thiebaut M, Rizzo AA. Scoring a 3D virtual environment rod-and-frame test: the reliability and validity of 4 scoring methods. *J Inter Neuropsychol Soc.*2002;8:153.
- McGee, JS, van der Zaag CD, Turk AA, Rizzo AA, **Buckwalter JG**. Age, gender, and spatial ability in normal aging: an examination of mental rotation. *J Inter Neuropsychol Soc* 2001;7:254.
- McGee, JS, Turk AA, van der Zaag CD, **Buckwalter JG**, Rizzo AA. Cognitive mediators for learning mental rotation via virtual environment training. *J Inter Neuropsychol Soc* 2001;7:255.
- Buckwalter JG**, Reger G, Parsons TD, Luna LM, Clason C, Rizzo AA. Aging and cognition: a test of the common cause hypothesis. *J Inter Neuropsychol Soc* 2001;7:225.
- Rizzo AA, **Buckwalter JG**, Humphrey L, van der Zaag C, Bowerly T, Chua C, Neumann U, Kyriakakis C. A virtual reality classroom scenario for ADHD Assessment [abstract]. *J Inter Neuropsychol Soc* 2000;6:244.
- van der Zaag C, McGee J, **Buckwalter JG**, Rizzo A, van Rooyen, AD, Larsen P, Kratz K, Bluestein B, Neumann U, Thiebaut, M. Virtual reality assessment of visuospatial abilities in the elderly *J Inter Neuropsychol Soc* 2000;6:146.
- van Rooyen AD, Rizzo, AA, **Buckwalter JG**, Larson PJ, Kratz KE, Thiebaut M. The Virtual Spatial Rotation Test: a study of psychometric properties [abstract]. *J Inter Neuropsychol Soc*, 2000;6
- Buckwalter JG**, Kratz K, Poysky J, Clason C, Luna LM, Parson T, Reger G, Stanczyk FZ. Insulin-Like Growth Factor, cognition and mood in post-menopausal women. *J Soc Gynecol Investigation* 2000;7(Suppl):224A.
- Turk AA, Hernandez I, Chui H, **Buckwalter JG**. Gender effects in an elderly Hispanic population with dementia [abstract]. *J Inter Neuropsychol Soc* (in press).
- Grills CE, Miller CA, Henderson VW, Murdock GA, **Buckwalter JG**. Gender differences in atrophy, neuritic plaques and neurofibrillary tangles in Alzheimer's disease [abstract]. *J Inter Neuropsychol Soc* (in press).
- Hindman DW, Turk AA, Stanczyk FZ, McCleary CA, Bluestein BW, Buckwalter DK, Rankin KP, Chang L, **Buckwalter JG**. Fetal gender and cognitive performance in pregnant women [abstract]. *J Inter Neuropsychol Soc* (in press).

- Arnold G, **Buckwalter JG**. Relationship between insulin-like growth factor-1 and cognitive performance in women with and without Alzheimer's disease.
- Hernandez I, Turk AA, Smith CA, Chui H, **Buckwalter JG**. Effects of age and education on neuropsychological performance in an elderly Hispanic population [abstract]. *J Inter Neuropsychol Soc* (in press).
- Poysky JT, Kratz KE, Thompson EM, Stanczyk FZ, **Buckwalter JG**. Dehydroepiandrosterone and neurobehavioral functioning: a randomized trial. [abstract]. *J Inter Neuropsychol Soc* (in press).
- McGee JS, Kreutzberg JD, Henderson VW, Murdock GA, McCleary CA, **Buckwalter JG**. Verbal learning and memory: differences between normal control elderly participants and those with subjective memory complaints [abstract]. *J Inter Neuropsychol Soc* (in press).
- Kratz KE, Poysky JT, Thompson EM, Rizzo AA, Stanczyk FZ, **Buckwalter JG**. Dehydroepiandrosterone and cognitive functioning: a randomized trial [abstract]. *J Inter Neuropsychol Soc* (in press).
- Hallam B, Clason C, **Buckwalter JG**, Brown W. Regional callosal morphology and cognitive function in Alzheimer's Disease. *J Inter Neuropsychol* (in press).
- Keuning A, Bertke E, McBurney-Rebol K, **Buckwalter JG**, Brown W. Hormonal influence on interhemispheric functioning in women *J Inter Neuropsychol Soc* (in press).
- Bluestein BW, Stanczyk FZ, Goodwin TM, McCleary CA, Buckwalter DK, Rankin KP, Chang L, **Buckwalter JG**. Cognitive implications of morning sickness [abstract]. *J Soc Gynecol Invest* 1999; 6 (Suppl)
- Thompson EM, Stanczyk FZ, Goodwin TM, McCleary CA, Bluestein BW, Rankin KP, Buckwalter DK, Chang L, **Buckwalter JG**. Prior pregnancy and cognitive deficits during and after pregnancy [abstract]. *J Soc Gynecol Invest* 1999; 6 (Suppl)
- Buckwalter DK, Stanczyk FZ, Goodwin TM, McCleary CA, Rankin KP, Bluestein BW, Chang L, **Buckwalter JG**. Hormonal aspects of reported premenstrual/menstrual mood [abstract]. *J Soc Gynecol Invest* (in press).
- Marion SD, Brown WS, Cho S, Bertke ED, McBurney-Rebol K, **Buckwalter G**. Effects of variations in estrogen on visuomotor and callosal functioning. *J Inter Neuropsychol Soc* 1999;5:103.
- C.A. Smith, G.A. Murdock, C.A. McCleary, A.A. Rizzo, V.W. Henderson, & **J.G. Buckwalter**. Gender differences in processing line orientation [abstract]. *J Inter Neuropsychol Soc* 1999;5:114.
- K.E. Kratz, **J.G. Buckwalter**, G.A. Murdock, C.A. McCleary, J.T. Poysky, & V.W. Henderson. Gender differences in cognition between probable Alzheimer's Disease subjects and those with subjective memory complaints. [abstract]. *J Inter Neuropsychol Soc* 1999;5:150.
- J.T. Poysky, G.A. Murdock, K.E. Kratz, C.A. McCleary, V.W. Henderson, & **J.G. Buckwalter**. Neuropsychological decline and the onset of subjective memory complaints. [abstract]. *J Inter Neuropsychol Soc* 1999;5:113-114.
- D.K. Buckwalter, B.W. Bluestein, F.Z. Stanczyk, C.A. McCleary, T.M. Goodwin, L. Chang, K.P. Rankin, & **J.G. Buckwalter**. Long term neurobehavioral effects of pregnancy. [abstract]. *J Inter Neuropsychol Soc* 1999;5:103-104.
- A.A. Rizzo, **J.G. Buckwalter**. Basic issues in the use of virtual reality for applications in neuropsychology. [Symposium abstract]. *J Inter Neuropsychol Soc* 1999;5:125.
- Buckwalter JG**, A.A. Rizzo, U. Neumann, C. Kesselman, M. Thiebaut, P. Larson, A. van Rooyen, & K. Kratz. The virtual reality mental rotation spatial skills project. [Symposium abstract]. *J Inter Neuropsychol Soc* 1999;5:125.
- Buckwalter JG**, Stanczyk FZ, Murdock GA, McCleary CA, Smith CA, Henderson VW. Dehydroepiandrosterone and cognitive performance in postmenopausal women [abstract]. *J Soc Gynecol Invest* 1998;5 (Suppl):99A.
- Rizzo AA, Henderson VW, Murdock GA, McCleary CA, **Buckwalter JG**. Sex differences on mental rotation performance in elderly individuals [abstract]. *J Inter Neuropsychol Soc* 1998;4:53.
- Buckwalter JG**, Seeman TE, Kratz K, Larson P, van Rooyen A. Cognitive performance and cortisol reactivity in healthy elderly individuals [abstract]. *J Inter Neuropsychol Soc* 1998;4:54.

- Philpott LM, Kopyov OV, Yang MC, Dow L, Jacques S, Eagle KS, **Buckwalter JG**. Neuropsychological functioning and MRI-based striatal volume measurements in Huntington's disease. *J Inter Neuropsychol Soc* 1998;4:65
- Drake EB, Henderson VW, Brown WS, McCleary CA, Murdock GA, **Buckwalter JG**. The relationship between circulating steroid sex hormones and cognition in nondemented elderly women [abstract]. *J Inter Neuropsychol Soc* 1998;4:72.
- Rizzo AA, **Buckwalter JG**, Neumann U. Virtual reality technology: potential tools for neuropsychological assessment and cognitive rehabilitation [abstract]. *J Inter Neuropsychol Soc* 1998;4:50.
- Pelo DK, Henderson VW, McCleary CA, Murdock GA, **Buckwalter JG**. The association between naming ability and memory for visual reproduction. *J Inter Neuropsychol Soc* 1998;4:45.
- Henderson, VW, Murdock GA, **Buckwalter JG**, Kratz K, McCleary CA, Henderson VW. Subjective memory complaints in aging: gender-associated cognitive differences. *Ann Neurol* 1997;42:M22.
- Buckwalter JG**, McCleary CA, Leung KR, Blustein BW, Payne DK, Goodwin TM. The effects of pregnancy on verbal memory [abstract]. *J Inter Neuropsychol Soc* 1997;3:6-7.
- Buckwalter JG**, Wilshire TW, Smith CA, Payne DK. Reproductive and menstrual characteristics of elderly women with and without Alzheimer's disease [abstract]. *J Inter Neuropsychol Soc* 1997;3:35.
- Smith CA, **Buckwalter JG**. Age at menarche and cognitive performance in elderly women [abstract]. *J Inter Neuropsychol Soc* 1997;3:52.
- Smith CA, **Buckwalter JG**, McCleary CA, Murdock GA. Anosognosia in Alzheimer's disease [abstract]. *J Inter Neuropsychol Soc* 1997;3:65.
- Smith CA, **Buckwalter JG**, Murdock GA, McCleary CA, Henderson VW. Lifetime estrogen exposure and cognitive performance in elderly women. *Brain Cognition* 1997;35:
- McLeary C, **Buckwalter JG**. Predicting seizure laterality using clinical measures of verbal and visual memory [abstract]. *J Inter Neuropsychol Soc* 1996;2:54.
- Henderson VW, Cherry BJ, **Buckwalter JG**. Memory span procedures and working memory in Alzheimer's disease [abstract]. *J Inter Neuropsychol Soc* 1996;2:12.
- Cherry BJ, **Buckwalter JG**, Henderson VW. Episodic memory in Alzheimer's disease: comparisons of digit span, wordspan, and immediate and delayed recall on a supraspan word list [abstract]. *J Inter Neuropsychol Soc* 1996;2:12.
- Buckwalter JG**, Wilshire TW, Smith CA, Henderson VW. Estrogen exposure: comparisons between demented and non-demented women. *Alzheimer's Res.* 1995;1(suppl 1):37.
- Buckwalter JG**, Schneider LS, Dunn ME, Henderson VW, and the Tacrine Study Group. Higher body weight is associated with better cognitive performance in women with probable Alzheimer's disease [abstract]. *Neurology.* 1994;44 (suppl 2);A187.
- Henderson VW, Watt LE, **Buckwalter JG**. Estrogen replacement therapy and neuropsychological performance in women with probable Alzheimer's disease: a case control study [abstract]. *Neurology.* 1994;44(suppl 2):A158.
- Buckwalter JG**, Wilshire TW, Dunn ME, Henderson VW. Alzheimer's disease and fecundity: an example of antagonistic pleiotropy? *Neurobiol Aging.* 1994;15(suppl 1):S127.
- Sobel E, Davanipour Z, Sulkava R, Bowman JD, Erkinjuntti T, Henderson V, **Buckwalter JG**. Occupational exposure to electromagnetic fields is associated with increased risk of Alzheimer's disease. *Neurobiol Aging.* 1994;15(suppl 1):304.
- Logan CG, **Buckwalter JG**, Henderson VW. Clock drawing in Alzheimer's disease [abstract]. *Society for Neuroscience Abstracts*, 1993:19.
- Paganini-Hill A, **Buckwalter JG**, Logan CG, Henderson VW. Estrogen replacement and Alzheimer's disease [abstract]. *Society for Neuroscience Abstracts*, 1993:19.
- Buckwalter JG**, Murdock GA, Miller CA, Henderson VW. Gender-associated neuropathological features of Alzheimer's disease [abstract]. *Neurology*, 1993;43:250-251.
- Henderson, VW, **Buckwalter JG**. Earlier age of symptom onset for men with Alzheimer's disease but no gender differences in survival [abstract]. *Neurology*, 1993;43:278.

- Buckwalter JG**, Sobel E, Diz MM, Henderson VW. Gender-specific cognitive differences in Alzheimer's disease [abstract]. *Annals of Neurology*, 1992:32;293-294.
- Henderson VW, **Buckwalter JG**, Mylvaganam G. Handedness and longevity in patients with autopsy-confirmed Alzheimer's disease [abstract]. *Annals of Neurology*, 1992:32;243.
- Logan CG, **Buckwalter JG**, Henderson VW. Boston Naming Test error analysis in Alzheimer's disease [abstract]. *Society for Neuroscience Abstracts*, 1992:18;736.
- Henderson VW, **Buckwalter JG**. Naming performance in Alzheimer's disease is more impaired in women than in men [abstract]. *Society for Neuroscience Abstracts*, 1992:18;735.
- Kopyov OV, Jacques DB, Rand RW, Craft J, **Buckwalter JG**. Fetal human and pig mesencephalon xenografts have equal effectiveness in behavioral restoration of damaged rat brain [abstract]. *Transplantation Proceedings*, 1992:24;547-548.
- Buckwalter JG**, Sobel E, Diz MM, Henderson VW. The effects of family history and gender on the neuropsychological performance of Alzheimer's patients [abstract]. *Journal of Clinical and Experimental Neuropsychology*, 1992:14;23.
- Henderson VW, **Buckwalter JG**, Diz MM. Agraphia in Alzheimer's disease: predictors of dementia severity and differentiation of demented from non demented [abstract]. *Journal of Clinical and Experimental Neuropsychology*, 1992:14;23.

#### Grants:

- |    |  |   |                 |               |
|----|--|---|-----------------|---------------|
| a. | <u>Source and identifying no.</u>  | NIA-NIH R01 AG19218-01  | <u>PI</u>       | JG Buckwalter |
|    | <u>Title</u>   | The Development and Validation of a Telephone Screening Test of Cognitive Function.   |                 |               |
|    | <u>Your role on the project:</u>   | Principal Investigator  | <u>% effort</u> | 30%           |
| c. | <u>Dates and direct cost of the entire project</u>   | 10/1/01- 9/30/04  |                 | \$1,119,418   |
| d. | <u>Dates and direct cost of first year</u>   | 10/1/01-9/33/02   |                 | \$ 314,023    |
| e. | <u>Specific aims of project</u> To develop a psychometrically sound screening test of multiple domains of cognition appropriate for telephone administration       |   |                 |               |
|    |  |   |                 |               |
| a. | <u>Source and identifying no.</u>  | NIA-NIH AG-14745  | <u>PI</u>       | DB Pettiti    |
|    | <u>Title</u>   | Alzheimer's Disease and Estrogen Replacement  |                 |               |
| b. | <u>Your role on the project</u>  | Co-Principal Investigator   | <u>% effort</u> | 20%           |
| c. | <u>Dates and direct cost of the entire project</u>   | 5/1/98-4/31/04  |                 | \$1,805,888   |
| d. | <u>Dates and direct cost of first year</u>   | 5/1/98-4/31/98  |                 | \$ 396,850    |
| e. | <u>Specific aims of project</u> To conduct a population-based study on the effects of estrogen replacement on the prevalence and incidence of Alzheimer's disease. |   |                 |               |
|    |  |   |                 |               |
| a. | <u>Source and identifying no.</u>  | NICHD-NIH HD41113   | <u>PI</u>       | K Luber       |
|    | <u>Title</u>   | Epidemiology of Pelvic Floor Disorders: Prevalence and Effects of Vaginal Delivery on Pelvic Floor Function Co-Investigator |                 |               |
| b. | <u>Your role on the project</u>  | Investigator  | <u>% effort</u> | Consultant    |
| c. | <u>Dates and direct cost of the entire project</u>   | 7/1/02-6/30/04  |                 | \$525,000     |
| d. | <u>Dates and direct cost of first year</u>   | 7/1/02-6/30/03  |                 | \$ 278,890    |
| e. | <u>Specific aims of project:</u> To conduct a population-based study on reproductive and lifestyle factors contributing to pelvic floor disorders.                 |   |                 |               |
|    |  |   |                 |               |
| a. | <u>Source and identifying no.</u>  | The Charles Dana Foundation   | <u>PI</u>       | JG Buckwalter |
|    | <u>Title</u>   | A Randomized Trial of Raloxifene: Comparisons with Estrogen and Alendronate   |                 |               |
| b. | <u>Your role on the project</u>  | Principal Investigator  | <u>% effort</u> | 10%           |
| c. | <u>Dates and direct cost of the entire project</u>   | 1/1/01-6/30/03  |                 | \$100,000     |

- d. Dates and direct cost of first year 1/1/01-12/31/02 \$ 48,951
- e. Specific aims of project: To conduct a randomized clinical trial of the cognitive effects of raloxifene, estrogen and alendronate among postmenopausal women treated for osteoporosis.
- a. Source and identifying no. NIA-NIH P50 AG05142 PI CE Finch, CA Miller  
Title Alzheimer's Disease Research Center Consortium of Los Angeles and Orange Counties
- b. Your role on the project Associate Director Clinical Core. % effort 50%
- c. Dates and direct cost of the entire project 4/1/94-3/31/99 \$11,648,675
- d. Dates and direct cost of current year 4/1/98-3/31/99 \$ 2,108,001
- e. Specific aims of project To provide multi-disciplinary resources for research on Alzheimer's disease and related disorders.
- a. Source and identifying no. NIA-NIH P50 AG05142 P2 PI JG Buckwalter  
Title Virtual Reality and the Assessment of Spatial Skills in the Elderly
- b. Your role on the project PI % effort 10%
- c. Dates and direct cost of the entire project 4/1/98-3/31/99 \$20,000
- d. Dates and direct cost of current year 4/1/98-3/31/98 \$ 20,000
- e. Specific aims of project To explore the feasibility of using virtual reality with the elderly.
- a. Source and identifying no. NIA-NIH P50 AG05142S1 PI JG Buckwalter  
Title Alzheimer's Disease Research Center Supplement: Gonadal Steroid Hormones in Alzheimer's Disease.
- b. Role on the project PI % effort 20%
- c. Dates and direct cost of the entire project 10/1/94-3/31/99 \$216,000
- e. Specific aims of project Collect blood from 200 elderly subjects, with and without Alzheimer's disease to be analyzed for levels of several gonadal steroid hormones. Data will be analyzed for group differences and for factors predicting clinical course of Alzheimer's disease subjects.
- a. Source and identifying no. NIA R25 AG11325. PI J. Cummings  
Title Los Angeles Area Alzheimer's Outreach Project.
- b. Role on the project Co-PI. % effort 15%
- c. Dates and direct cost of entire project 10/1/95 - 9/30/98 \$ 316,356
- e. Specific aims of project To provide training in the diagnosis of Alzheimer's disease to physicians who serve minority communities in the Los Angeles area.
- a. Source and identifying no. University of Southern Calif PI JG Buckwalter  
Title Zumberge Faculty Innovative Research Grant: Gender Differences in Alzheimer's Disease
- b. Your role on the project PI % effort 20%
- c. Dates and direct cost of the entire project 10/1/93-9/30/94 \$ 24,000
- e. Specific aims of project To determine the pattern of cognitive differences between men and women with Alzheimer's disease

**Patent:**

U.S. Pat. No. 6,735,568: Issued 5/11/2004: Originally Filed 7/10/00: Buckwalter, et al.

*Method and System for Identifying People who are Likely to Have a Successful Relationship.*

This patent was developed as an independent consultant for eharmony.com. The invention described serves as the empirical basis for this highly successful online relationship building company.

Several proprietary patents are under evaluation.