

BRONYA VASCHILLO, M. D.

93 Horizon Drive

Edison, NJ 08817

Phone: (848) 445-3643 work;

(732) 659-0809 home

Email: bvaschil@rutgers.edu

WORK EXPERIENCE

2018 – present Rutgers University. Department of Kinesiology and Health.

Research Associate

2004 – 2018 Rutgers University. Center of Alcohol Studies.

Research Associate

2003 – 2004 University of Medicine and Dentistry of New Jersey.

NJMS-VA Neurosciences.

Research Teaching Specialist III

Investigate aversive sounds effects on human body.

1999 – 2003 University of Medicine and Dentistry of New Jersey,

Research Associate

Develop RSA biofeedback methods for asthma, fibromyalgia, and hypertension treatment.

Worked on project “Respiratory Sinus Arrhythmia Biofeedback for Asthma Treatment”. This project investigated the effects of biofeedback to increase amplitude of respiratory sinus arrhythmia as a treatment for asthma. It also investigated the effects of this procedure on baroreflex gain, amplitude of heart rate and blood pressure oscillations, and various other psychophysiological indices among both: asthma patients and healthy subjects.

1987-1996 Saint-Petersburg Board of Public Health, Saint Petersburg, Russia,

Group Leader, Medical Statistics and Medical Information

Analysis

Data processing, classification and analysis of sickness rate, death rate, morbidity, and mortality from all hospitals and medical centers in the city. Analyzing overall statistics, interpreting the results, preparing final reports for the Ministry of Health, developing methodological guidelines for medical doctors. Inspecting the quality of data collection, analysis, and statistical processing in local hospitals and medical centers.

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1992-1996 Medical School #2, Saint Petersburg, Russia,

Visiting Professor

Teaching post-graduate classes on medical statistics and data analysis to working professionals.

1970-1987 Sanitary Epidemiological Station, Saint Petersburg, Russia,

Group Leader, Prevention of Occupational Diseases, Safety, and Industrial Hygiene

Occupational diseases, investigation and prevention. Inspection and analysis of unhealthy working conditions in industry. Analysis of morbidity among workers in harmful and hazardous conditions. Inspection of noise, vibration, and air pollution levels. Investigating harmful and hazardous materials at and around workplaces. Data analysis and diseases prevention actions planning. Personal protective equipment inspection. Occupational safety. Inspection of construction projects for new industrial buildings.

EDUCATION

1963-1969 **Medical Doctor**

Saint Petersburg Medical University for Hygiene and Sanitation,
Russia.

RECOGNITIONS AND AWARDS

National Medal "Veteran of Labor"

Diploma for First Category Doctor in Medical Statistics

Diploma for Second Category Doctor in Occupational Diseases and
Industrial Hygiene

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

Member of AAPB editorial board. Since April 2020.

Society for Psychophysiological Research (SPR)

International Society for the Advancement of Respiratory Physiology (ISARP)

Baltic Society for Integrated Psychophysiology (Baltic SIP) – Board member

PUBLICATIONS**Peer-Reviewed Publications**

Vaschillo, B. and Vaschillo, E.G. Can Arterial Elasticity Be Estimated From Heart Rate Variability Response to Paced 0.066 Hz Sighing? *Psychophysiology*. First published:25 February 2020.

<https://doi.org/10.1111/psyp.13552>.

Leganes-Fonteneau, M., Buckman, J., Islam, S., Pawlak, A., Vaschillo, B., Vaschillo, E., and Bates, M. The Cardiovascular Mechanisms of Interoceptive Awareness: Effects of Resonance Breathing. *International Journal of Psychophysiology*. 2019. In revision.

Leganes-Fonteneau, M., Buckman, J., Pawlak, A., Vaschillo, B., Vaschillo, E., and Bates, M. Interoceptive Mechanisms of Alcohol Cognitive Biases: Alliesthetic Components and Role of Family History. *Addiction Biology*. 2019. In revision.

Lehrer, P.M., Wamboldt, F., Vaschillo, B., Lu, S-E., and Irvin, C.G. The Effect of Heart Rate Variability Biofeedback on Anxiety, Depression, and Hyperventilation in Adult Mild Asthma, and Correlations With Asthma Measures: An Exploratory Study. *Applied Psychophysiology and Biofeedback*.?

Buckman, J.F., Vaschillo, B., Vaschillo, E.G., Epstein, E.E., Nguyen-Louie, T., Lesnewich, L.M., Eddie, D., & Bates, M.E. Improvement in Women's Cardiovascular Functioning during Cognitive-Behavioral Therapy for Alcohol Use Disorder. *Psychology of Addictive Behaviors*. 2019, November. doi: 10.1037/adb0000524.

Bates, M.E., Mun, E-Y., Buckman, J.F., Vaschillo, E.G., Vaschillo, B., Lehrer, P., Udo, T., and Lesnewich, L.M. Getting to the Heart of Low Sensitivity to Alcohol: Context Moderates Low Cardiovascular Response to Alcohol in Persons with a Family History of Alcohol Use Disorder. *Alcoholism: Clinical and Experimental Research*. 2020, January. doi: 10.1111/acer.14293.

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Heiss, S., Singh, G., and Bates, M.E. Early Signs of Cardiovascular Dysregulation in Young Healthy Binge Drinkers. *Psychophysiology*. 2018, May; 55(5):e13036. doi: 10.1111/psyp.13036. Epub 2017 Nov 29. PMID: 29193139 PMCID: PMC5899634

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., and Bates, M.E. Heart Rate Variability affects fMRI BOLD. 2019. In preparation.

Lehrer, P.M., Irvin, C.G., Lu, S-E., Scardella, A., Roehmheld-Hamm, B., Aviles-Velez, M., Graves, J., Vaschillo, E.G., Vaschillo, B., Hoyte, F., Nelson, H., & Wamboldt, F.S. Heart Rate Variability Biofeedback Does Not Substitute for Asthma Steroid Controller Medication. *APB (Applied Psychophysiology and Biofeedback)*. 2018, March; 43(1):57-73. doi: 10.1007/s10484-017-9382-0. PMID: 29124506 PMCID: PMC5871536

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Nguyen-Louie, T., Heiss, S., Pandina, R.J., and Bates, M.E. The effects of sighing on the cardiovascular system. *Biological Psychology*. 2015, March; 106: 86-95. doi:10.1016/j.biopsycho.2015.02.007.

Buckman, J.F., Eddie, D., Vaschillo, E.G., Vaschillo, B., Garcia, A., and Bates, M.E. Immediate and Complex Cardiovascular Adaptation to an Acute

- Alcohol Dose. *ACER (Alcoholism: Clinical and Experimental Research)*. 2015, December; 39(12):2334-2344. doi:10.1111/acer.12912.
- Eddie, D., Vaschillo, E.G., Vaschillo, B., & Lehrer, P. Heart Rate Variability Biofeedback: Theoretical Basis, Delivery, and its Potential for the Treatment of Substance Use Disorders. *Addiction Research and Theory*. 2015, February; 23(4): 266-272. doi:10.3109/16066359.2015.1011625.
- Fonoberova, M., Mezić, I., Buckman, J.F., Fonoberov, V.A., Mezić, A., Vaschillo, E.G., Mun, E-Y., Vaschillo, B., and Bates M.E. A Computational Physiology Approach to Personalized Treatment Models: The Beneficial Effects of Slow Breathing on the Human Cardiovascular System. *American Journal of Physiology-Heart and Circulatory Physiology*. 2014, October; 307(7): 1073-1091.
- Udo, T., Mun, E-Y., Buckman, J. F., Vaschillo, E.G., Vaschillo, B., and Bates, M.E. Potential Side Effects of Unhealthy Lifestyle Choices and Health Risks on Basal and Reactive Heart Rate Variability in College Drinkers. *JSAD (Journal of Studies on Alcohol and Drugs)*. 2013, September; 74(5): 787-796.
- Lehrer, P., Buckman, J.F., Mun, E-Y., Vaschillo, E.G., Vaschillo, B., Udo, T., Nguyen, T., Bates, M.E. Negative Mood and Alcohol Problems are Related to Respiratory Dynamics in Young Adults. *AAPB (Applied Psychophysiology and Biofeedback)*. 2013, Aug; 38(4): 273-283.
- Eddie, D., Buckman, J. F., Mun, E-Y., Vaschillo, B., Vaschillo, E., Udo, T., Lehrer, P., and Bates, M.E. Different Associations of Alcohol Cue Reactivity with Negative Alcohol Expectancies in Mandated and Inpatient Samples of Young Adults. *Addictive Behaviors*. 2013, April; 38(4): 2040-2043. doi: 10.1016/j.addbeh.2013.01.006.
- Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Pandina, R.J., and Bates, M.E. Measurement of Vascular Tone and Stroke Volume Baroreflex Gain. *Psychophysiology*. 2012, Feb; 49(2):193-197.
- Bates, M.E., Buckman, J.F., Vaschillo, E.G., Fonoberov, V.A., Fonoberova, M., Vaschillo, B., Mun, E.Y., Mezić, A., Mezić, I. The redistribution of: neurocardiac signaling, alcohol and gender. *PLoS ONE (Public Library of Science journal)*. 2011, Dec; 6(12): e28281.
- Vaschillo, E.G., Vaschillo, B., Pandina, R.J., and Bates, M.E. Resonances in the Cardiovascular System Caused by Rhythmical Muscle Tension. *Psychophysiology*. 2011, July; 48(7): 927-936.
- Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Bates, M.E., and Pandina, R. J. Resonances in the Cardiovascular System - Investigation and Clinical Applications. *BIOSIGNALSINSTICC Press*. 2010, Jan; 21-28.
- Lehrer, P., Karavidas, M., Lu, S.E., Vaschillo, E., Vaschillo, B., and Cheng, A. Cardiac Data Increase Association Between Self-Report and Both Expert Ratings of Task Load and Task Performance in Flight Simulator Tasks: An Exploratory Study. *International Journal of Psychophysiology*. 2010, May; 76(2): 80-87.
- Karavidas, M.K., Lehrer, P.M., Lu, S.E., Vaschillo, E., Vaschillo, B., and Cheng, A. The Effects of Workload on Respiratory Variables in Simulated Flight: A Preliminary Study. *Biological Psychology*. 2010, Apr; 84(1): 157-160.

- Vaschillo, E.G. and Vaschillo, B. Transfer Function of the Heart Rate Control System with Respiratory Input - The Classical Engineering Approach. BIOSIGNALSINSTICC Press. 2009, Jan; 233-238.
- Udo, T., Bates, M.E., Vaschillo, E., Vaschillo, B., Lehrer, P., Mun, E.Y., and Ray, S. Gender Differences in Acute Alcohol Effects on Self-Regulation of Arousal in Response to Emotional and Alcohol-Related Picture Cues. *Psychology of Addictive Behaviors*. 2009. 23(2): 196-204. doi: 10.1037/a0015015.
- Vaschillo, E.G., Bates, M.E., Vaschillo, B., Lehrer, P., Udo, T., Mun, E.Y., & Ray, S. Heart Rate Variability Response to Alcohol, Placebo, and Emotional Picture Cue Challenges: Effects of 0.1 Hz Stimulation. *Psychophysiology*. 2008, Sep; 45(5): 847-858.
- Lehrer, P.M., Karavidas, M., Lu, S., Vaschillo, E., Vaschillo, B., Karavidas, P. Contribution of Psychophysiological Measures to Evaluating Flight Task Workload Under Simulated Conditions. 2008. <http://www.tc.faa.gov/logistics/grants/pdf/2004/04-G-004.pdf>
- Karavidas, M., Lehrer, P.M., Vaschillo, E., Vaschillo, B., Marin, H., Buyske, S., Malinovsky, I., Radvanski, D., Hassett, A. Preliminary Results of an Open Label Study of Heart Rate Variability Biofeedback for the Treatment of Major Depression. *Applied Psychophysiology and Biofeedback*. 2007, Mar; 32(1): 19-30.
- Hassett, A.L., Radvanski, D.C., Vaschillo, E., Vaschillo, B., Sigal, L., Karavidas, M., Buyske, S., & Lehrer, P.M. A Pilot Study of the Efficacy of Heart Rate Variability Biofeedback in Patients with Fibromylgia Syndrome. *Applied Psychophysiology and Biofeedback*. 2007, Mar; 32(1): 1-10.
- Vaschillo, E.G., Vaschillo, B., Lehrer, P.M. Characteristics of Resonance in Heart Rate Variability Stimulated by Biofeedback. *Applied Psychophysiology and Biofeedback*. 2006, Jun; 31(2): 129-142.
- Lehrer, P., Vaschillo, E., Lu, S.E., Eckberg, D., Vaschillo, B., Scardella, A., and Habib, R. Heart Rate Variability Biofeedback: Effects of Age on Heart Rate Variability, Baroreflex Gain, and Asthma. *Chest*. 2006, Feb; 129(2): 278-284.
- Vaschillo, E., Vaschillo, B., and Lehrer, P. Heartbeat Synchronizes with Respiratory Rhythm Only Under Specific Circumstances. *Chest*. 2004, Oct; 126(4): 1385-1386.
- Lehrer, P.M., Vaschillo, E., Vaschillo, B., Lu, S.E., Scardella, A., Siddique, M., and Habib, R.H. Biofeedback Treatment for Asthma. *Chest*. 2004, Aug; 126(2): 352-361.
- Lehrer, P.M., Vaschillo, E., Vaschillo, B., Lu, S-E., Eckberg, D., Edelberg, R., Shih, W. J., Lin, Y., Kuusela, T.A., Tahvanainen, K.U.O., & Hammer, R. Heart Rate Variability Biofeedback Increases Baroreflex Gain and Peak Expiratory Flow. *Psychosomatic Medicine*. 2003, Sep-Oct; 65(5):796-805.
- Lehrer, P.M, Vaschillo, E & Vaschillo, B. Resonant Frequency Biofeedback Training to Increase Cardiac Variability: Rationale and Manual for Training. *Applied Psychophysiology and Biofeedback*. 2000, Sep; 25(3):177-191.

Other Journal Articles

- Lehrer, P., Vaschillo, B., Zucker, T., Graves, J., Katsamanis, M., Aviles, M., & Wamboldt, F. Protocol for Heart Rate Variability Biofeedback Training. *Biofeedback*. 2013. 41(3): 98-109.
- Lagos, L., Bottiglieri, T., Vaschillo, B., Vaschillo, E. Heart Rate Variability Biofeedback for Postconcussion Syndrome: Implications for Treatment. *Biofeedback*. 2012. 40(4): 150-153.
- Lagos, L., Vaschillo, E., Vaschillo, B., Lehrer, P., Bates, M., & Pandina, R. Virtual Reality-Assisted Heart Rate Variability Biofeedback as a Strategy to Improve Golf Performance: A Case Study. *Biofeedback*. 2011. 39(1): 15-20.
- Lagos, L., Vaschillo, E.G., Vaschillo, B., Lehrer, P., Bates, M.E., & Pandina, R. Heart Rate Variability Biofeedback as a Strategy for Dealing with Competitive Anxiety: A Case Study. *Biofeedback*. 2008. 36(3):109-115.

Book Chapters

- Vaschillo, E.G, Vaschillo, B., Buckman, J.F., Pandina, R.J., & Bates, M.E. The Investigation and Clinical Significance of Resonance in the Heart Rate and Vascular Tone Baroreflexes. In: A. Fred, J. Filipe, H. Gamboa (Eds). *Biomedical Engineering Systems and Technologies. Communications in Computer and Information Science*. Heidelberg, Germany. 2011. Volume 127, Part 4, 224-237.
- Lehrer, P.M, Vaschillo, E., & Vaschillo, B. Resonant Frequency Biofeedback Training to Increase Cardiac Variability: Rationale and Manual for Training. In M. Shtark & M. Swartz (Eds.) *Biofeedback-4. Theory and Practice*. Novosibirsk. Russia. 2002. pp. 157-166.
- Lehrer, P.M, Vaschillo, E., & Vaschillo, B. Resonant Frequency Biofeedback Training to Increase Cardiac Variability: Rationale and Manual for Training. In Zheng, Y.P. (Ed.) *Outline of Biofeedback Practice*. Beijing: Higher Education Press. (In press).

Convention presentations and abstracts

- Vaschillo, E., Vaschillo, B., Buckman, J., & Bates, M. New Approach for Brain Stimulation. Presented at the 3rd International Brain Stimulation Conference Meeting. Vancouver, Canada. February 24-27, 2019. *Brain Stimulation*. 2019, 12(2), p. 393.
- Heiss, S., Vaschillo, B., Vaschillo, E., Timco, A., & Hormes, J.M. The Potential “Ideal Range” of Heart Rate Variability: A Literature Review and Proposed Novel Intervention for Anorexia Nervosa. Presented at the Annual Scientific Meeting of the International Conference of Eating Disorders (ICED). New York, NY. March 19, 2019.
- Lehrer, P., Vaschillo, E., Vaschillo, B., Irvin, C., & Wamboldt, F.

Emotion and asthma symptoms/physiology in a biofeedback study for asthma. Presented at the 77th Annual Scientific Meeting of the American Psychosomatic Society (APS). Vancouver, Canada. March 6-9, 2019.

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Muzumdar, N., & Bates, M.E. Why is it useful to estimate the gain of each of the three baroreflex branches? Presented at the 58th Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). Quebec City, Quebec, Canada. October 3-7, 2018. *Psychophysiology*. 2018, 55(1), p.S59.

Muzumdar, N., Vaschillo, E.G., Vaschillo, B., Buckman, J.F., and Bates, M.E. Comprehensive evaluation of the three branches of baroreflex. Presented at the CAS Annual Student Poster Session, Rutgers University. Piscataway, NJ. May 1, 2018.

Patel, M., Tandra, R., Lesnewich, L.M., Buckman, J.F., Vaschillo, B., Vaschillo, E., and Bates, M.E. The effect of visual alcohol cues and paced breathing on heart rate variability and baroreflex sensitivity during acute alcohol consumption. Presented at the CAS Annual Student Poster Session, Rutgers University. Piscataway, NJ. May 1, 2018.

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Singh, G., and Bates, M.E. Evaluation of arterial elasticity through heart rate variability. Presented at the 18th Annual Meeting at the Department of Psychiatry, Rutgers Poster Session. Piscataway, NJ. May 4, 2017.

Vaschillo, E., Vaschillo, B., Buckman, J., Singh, G., & Bates, M. The "Sigh" as a tool to reveal cumulative effects of alcohol on vascular tone regulation. Presented at the Annual Meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). Seattle, WA. October 7 - 9, 2016.

Vaschillo, E. G., Vaschillo, B., Buckman, J. F., Singh, G., & Bates, M. E. Sensitive characteristics of the heart rate variability. Presented at the 56th Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). Minneapolis, MN. September 21 - 25, 2016. Vaschillo, E. G., Vaschillo, B., Buckman, J. F., Singh, G., & Bates, M. E.

A heart rate variability parameter as a bio-marker of cardiovascular dysregulation associated with binge drinking. Presented at the 17th Annual Meeting at the Department of Psychiatry, Rutgers Poster Session. Piscataway, NJ. April 14, 2016.

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Francisco, A., and Bates, M.E. Early cardiovascular dysregulation in young healthy binge drinkers. Presented at the 55th Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). Seattle, WA. September 30 - October 4, 2015.

Patel, R., Vaschillo, E.G., Vaschillo, B., Buckman, J.F., and Bates, M.E. Emotional modulation of cardiovascular functions. Presented at the 55th Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). Seattle, WA. September 30 - October 4, 2015.

Vaschillo, E., Vaschillo, B., Buckman, J.F., Heiss, S., Francisco, R., & Bates, M.E. Early cardiovascular dysregulation in young healthy binge drinkers.

- Presented at the 2nd Annual Center of Alcohol Studies Poster Session. Piscataway, NJ. May, 2015.
- Banu, L.M., Peyser, D., Buckman, J.F., Vaschillo, B., Vaschillo, E., & Bates, M.E. Lower HRV during college predicts risky alcohol use after graduation: A longitudinal study. Presented at the annual meeting of Collaborative Perspectives on Addiction (CPA). Baltimore, MD. March 6-7, 2015.
- Vaschillo, E., Vaschillo, B., Buckman, J., Heiss, S., and Bates, M. Sigh to restore respiratory variability. Proposed mechanism. Presented at the annual meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). New Brunswick, NJ. September 19-21, 2014.
- Vaschillo, E., Buckman, J.F., Peyser, D., Heiss, S., Barnas, P., Banu, L., Puhalla, A., Vaschillo, B., Ray, S., Hanson, S., Hanson, C., Biswal, B., & Bates, M.E. Resonance breathing affects hemodynamic oscillations in the brain at 0.1 Hz. Presented at the annual meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). New Brunswick, NJ. September 19-21, 2014.
- Heiss, S., Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Puhalla, A., & Bates, M.E. Sigh as a trigger for the baroreflex. Presented at the Inaugural Annual Center of Alcohol Studies Poster Session. Piscataway, NJ. 2014.
- Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Nguyen, T., Puhalla, A., Wille, R., and Bates, M.E. Reaction of Cardiovascular Functions to Rhythmical Stimulation in the Very Low Frequency Range (0.01 - 0.05 Hz). Presented at the 53rd Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). Florence, Italy. October 2-6, 2013. *Psychophysiology*. 2013, 50(1), p.S116.
- Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Nguyen, T., Puhalla, A., Wille, R., and Bates, M.E. Sigh as a Trigger for the Baroreflex Protective Mechanism. Presented at the annual meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). Leuven, Belgium. September 27-29, 2013.
- Vaschillo, B., Vaschillo, E.G., Epstein, E.E., Buckman, J.F., Nguyen, T., and Bates, M.E. Changes in Physiological Modulation of Arousal following CBT Intervention in Women with Alcohol Use Problems. Presented at the 21st annual meeting of the Society for Prevention Research (SPR). San Francisco, California. May 28-31, 2013.
- Eddie, E., Bates, M.E., Epstein, E., Vaschillo, B., & Vaschillo, E. Heart Rate Variability, Negative Affect, and Personality Disorder Symptomology in Women Entering Treatment for Alcohol Dependence – Extension of Previous Findings. Poster presented at the 121st Annual Meeting of the APA, Late-Breaking Poster Session. Honolulu, HI. July 31-August 4, 2013.
- Eddie, D., Bates, M.E., Epstein, E.E., Vaschillo, B., & Vaschillo, E. Heart Rate Variability and Anxiety in Women Receiving Treatment for Alcohol Dependence. Presented at the 121st Annual Convention of the American Psychological Association (APA). Honolulu, Hawai'i. July 31-August 4, 2013.

- Eddie, D., Bates, M.E., Epstein, E., Vaschillo, E., & Vaschillo, B. Heart Rate Variability and Cluster-B Personality Disorder Symptomology in Women Receiving Treatment for Alcohol Dependence. Presented at the 36th annual meeting of the Research Society on Alcoholism (RSOA). Orlando, FL. June 22-26, 2013.
- Kim, C., Eddie, D., Lehrer, P., Vaschillo, B., Vaschillo, E., Deneke, E., Deitzler, T., and Bates, M.E. Brief Heart Rate Variability Biofeedback for Substance Use Disorders. Presented at the 44th Annual Scientific meeting of the Association for Applied Psychophysiology and Biofeedback (AAPB). Portland, Oregon. March 13-16, 2013.
- Eddie, D., Vaschillo, E., Vaschillo, B., Epstein, E.E., & Bates, M.E. Heart Rate Variability, Negative Affect, and Personality Disorder Symptomology in Women Entering Treatment for Alcohol Dependence. Presented at the 1st meeting of Collaborative Perspectives on Addiction conference (28/50 CPA). Atlanta, GA. May 3-4, 2013.
- Udo, T., Buckman, J. F., Vaschillo, E.G., Vaschillo, B., and Bates, M.E. Does Weight Status Moderate Risk for Alcohol Use Disorders in College Drinkers? Presented at the 36th Annual Scientific Meeting of the Research Society on Alcoholism (RSA). Orlando, Florida. June 22-26, 2013. *Alcoholism: Clinical and Experimental Research*. 2013, 37, Suppl. 2, 101A.
- Vaschillo, B., Vaschillo, E.G., Buckman, J.F., Nguyen, T., and Bates, M.E. Testing Cardiovascular Functions Regulation by Triggered 0.1 Hz Resonance. Presented at the 52nd Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). New Orleans, Louisiana. September 19–23, 2012. *Psychophysiology*. 2012, 49(1), p.S64.
- Buckman, J.F., Bates, M.E., Buyske, S., Nguyen, T., Vaschillo, B., Jalil, M., Vaschillo, E.G. The Intersection of Genes, Drinking Behaviors, and Neurocardiac Dynamics. Presented at the Annual Scientific Meeting of the Society for Neuroscience (SfN). New Orleans, Louisiana. October 13-17, 2012.
- Lehrer, P., Aviles, M., Katsamanis, M., Wamboldt, F., Graves, J., Vaschillo, E.G., Vaschillo, B. Effects of single-session 6/min paced breathing on HRV, pulse transit time, and theta:beta EEG ratio among adults with asthma. Presented at the Annual Meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). September, 28-30, 2012.
- Lehrer, P., Buckman, J.F., Vaschillo, E.G., Vaschillo, B., Udo, T., Mun, E-Y., Bates, M.E. Negative Affect and Substance Use Problems Influence Respiratory Response to Emotional Picture Cues. Presented at the 13th Annual Poster Session, Department of Psychiatry, University of Dentistry and Medicine/ Robert Wood Johnson Medical School. Piscataway, NJ. May 3, 2012.
- Lehrer, P., Buckman, J., Vaschillo, E., Vaschillo, B., Udo, T., Bates, M., Mun, E-Y. Dysfunctional Breathing Predicts Negative Emotion and Substance Abuse Problems. Presented at the 43rd Annual Scientific meeting of the Association for Applied Psychophysiology and Biofeedback (AAPB). Baltimore, MD. March 8-10, 2012.
- Vaschillo, E., Vaschillo, B., Buckman, J., Nguyen, T., Fonoberov, V., Mezić, I., and Bates, M. Effects of Baroreflex on Heart Rate Variability.

Presented at the Annual Meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). October 1–3, 2011.

Buckman, J.F., Bates, M.E., Vaschillo, E.G., Fonoberov, V.A., Fonoberova, M., Vaschillo, B., Mun, E.Y., Mezc, A., Nguyen, T., Mezc, I. An integrated heart-brain adaptive mechanism. Presented at the Annual Scientific Meeting of the Society for Neuroscience (SFN). November, 2011.

Eddie, D., Udo, T., Vaschillo, E., Vaschillo, B., Lehrer, P., & Bates, M.E. Alcohol Expectancies, Cue Reactivity, and History of Substance Dependence. Presented at the Annual Meeting of the American Psychological Association, NIAAA/NIDA Early Career Poster Session, Washington D.C. 2011.

Eddie, D., Udo, T., Vaschillo, E., Vaschillo, B., Lehrer, P., & Bates, M. Alcohol Expectancies, Physiological Cue Reactivity, Subjective Arousal, and Treatment for Substance Dependence. Presented at the 34th Annual Scientific Meeting of the Research Society on Alcoholism (RSA). August, 2011.

Vaschillo, E. G., Vaschillo, B., Buckman, J. F., Pandina, R. J., & Bates, M. E. Measurement of Vascular Tone Baroreflex Gain. Presented at the 50th Annual Scientific Meeting of the Society for Psychophysiological Research (SPR). Portland, Oregon. September 29 – October 3, 2010. *Psychophysiology*. 2010, 47(1), p.105.

Bates, M.E., Buckman, J., Vaschillo, E., Mun, E.Y., Vaschillo, B., & Udo, T. (2010, Abstract). Family History, Vulnerability Mechanisms, and Emotional Dysregulation. *ISBRA. Alcoholism: Clinical and Experimental Research*, 34 (Suppl), 84A.

Drozd, B. L., Bates, M. E., Vaschillo, E. G., Vaschillo, B., & Lehrer, P.M. Heart Rate Variability Biofeedback with Collegiate Student-athletes. Presented at the 41st Annual Scientific meeting of the Association for Applied Psychophysiology and Biofeedback (AAPB). San Diego, CA. March 25-27, 2010.

Mun, E. Y., Bates, M. E., Vaschillo, E. G., Vaschillo, B., Udo, T., & Lehrer, P. Emotional Stimulation Unveils New Alcohol Effects in Family History Positive Drinkers. Presented at the 33rd Annual Scientific Meeting of the Research Society on Alcoholism (RSA). San Antonio, Texas. June 26-30, 2010. *Alcoholism: Clinical and Empirical Research*, 34(6), 146.

Udo, T., Mun, E. Y., Vaschillo, E., Vaschillo, B., & Bates, M. E. Subjective and Autonomic Response to Acute Alcohol Intoxication in Male and Female College Students with Family History of Alcohol Use Disorders. Presented at the 18th annual meeting of the Society for Prevention Research (SPR). Denver, Colorado. June 1-4, 2010.

Udo, T., Mun, E. Y., Vaschillo, E., Vaschillo, B., Buckman, J. F., Lehrer, P., & Bates, M. E. Risk for Alcohol Use Problems and Low Neurophysiological Adaptability. Presented at the 18th annual meeting of the Society for Prevention Research (SPR). Denver, Colorado. June 1-4, 2010.

Mun, E. Y., Bates, M. E., Vaschillo, E. G., Vaschillo, B., Udo, T., & Lehrer, P. (2010, September). *Family history positive drinkers need high doses of alcohol to achieve arousal reduction*. Poster presented at the 3rd Annual Pioneers in Endocrinology Workshop, New Brunswick, NJ.

- Udo, T., Mun, E. Y., Vaschillo, E., Vaschillo, B., Buckman, J., Lehrer, P., & Bates, M. E. (2010, September). *Alcohol use to regulate emotion is linked to low HRV level and heightened HRV reactivity*. Poster presented at the 3rd Annual Pioneers in Endocrinology Workshop, New Brunswick, NJ.
- Ray, S., Bates, M. E., Vaschillo, E., Vaschillo, B., Lehrer, P., Mun, E. Y., & Udo, T. Baroreflex Activity is Linked to Enhanced Explicit Memory for Alcohol and Poly-Drug Picture Cues among Mandated College Students. Presented at the 32nd Annual Scientific Meeting of the Research Society on Alcoholism (RSA). San Diego, California. June 20-24, 2009.
- Udo, T., Buckman, J.F., Bates, M.E., Vaschillo, E., & Vaschillo, B. Latent Class Analysis of Psychosocial and Psychophysiological Risks for Drinking. Presented at the 119th Annual Convention of the American Psychological Association (APA). Toronto, Canada. August 6-9, 2009.
- Lehrer, P., Vaschillo, E., Vaschillo, B., Udo, T., Mun, E.Y., Ray, S., Buckman, J., Bates, M., & Pandina, R. Some Psychological and Behavioral Correlates of Respiratory Responses: Implications for Substance Abuse. Presented at the 10th Annual Poster Session. Department of Psychiatry, University of Dentistry and Medicine/ Robert Wood Johnson Medical School. Piscataway, NJ. June 18, 2009.
- Lehrer, P., Vaschillo, E., Vaschillo, B., Bates, M. E., Fisher, D. J., Udo, T., Mun, E. Y., Ray, S., & Buckman, J. (2009, October). *Psychological correlates of respiratory responses and their relationship to anxiety and drug/alcohol risk*. Presented at the 16th Annual Meeting of the International Society for Advancement of Respiratory Psychophysiology. Berlin, Germany.
- Vaschillo, B., Vaschillo, E.G., Bates, M.E., & Lehrer, P.M. Double Triphasic Waveform Heart Rate Response to Strong Stimuli: Implications for Behavioral Study of Emotional Regulation. Conference - Transdisciplinary Approaches to Mechanisms of Behavior Change (MOBC) in Alcohol: October 6-7, 2008, Columbia University. New York.
- Udo, T., Bates, M. E., Vaschillo, E., Vaschillo, B., & Buckman, J. F. Latent Class Analysis of Risk for Alcohol Problems: Integration of psychophysiological and psychosocial Factors. Conference - Transdisciplinary Approaches to Mechanisms of Behavior Change (MOBC) in Alcohol: October 6-7, 2008, Columbia University. New York.
- Vaschillo, B., Vaschillo, E.G., Bates, M.E., Lehrer, P.M. Double Triphasic Waveform Heart Rate Response to Strong Stimuli. Presented at the SPR (Society for Psychophysiological Research) 48th annual meeting. Austin, Texas. October 1-5, 2008. *Psychophysiology*. 2008, 45(1), p.110.
- Bates, M., Mun, E.Y., Vaschillo, E., Vaschillo, B., and Lehrer, P. Individual Differences in Alcohol Effects on Physiological Reactivity to Environmental Challenges During Emerging Adulthood. Presented at the 16th Annual Meeting of the Society for Prevention Research (SPR), San Francisco, CA. May 28-30, 2008.
- Buckman; J.F., Bates; M.E., Vaschillo, E., White, H.R., Vaschillo, B., Pandina, R.J. & Udo, T. Suppressed Physiological Reactivity to Positive Picture

Cues in College Students Mandated for Alcohol Interventions Through Medical or Legal Sources. Presented at the Annual Scientific Meeting of the Research Society on Alcoholism (RSA).

Washington, DC. June 27-July 3, 2008. *Alcoholism: Clinical and Experimental Research*. 2008, 32(6), p.233A.

Ray, S., Bates, M.E., Vaschillo, E., Vaschillo, B., Lehrer, P., & Udo, T. Heart Rate Variability Predicts Explicit and Implicit Memory for Negative Emotional Cues. Presented at the Annual Scientific Meeting of the Research Society on Alcoholism (RSA). Washington, DC. June 27-July 3, 2008.

Udo, T., Bates, M.E., Vaschillo, E., Vaschillo, B., Mun, E.Y., Lehrer, P., & Ray, S. Gender Differences in the Acute Dampening Effects of Alcohol on Emotional Response. Presented at the Annual Scientific Meeting of the Research Society on Alcoholism (RSA). Washington, DC. June 27-July 3, 2008.

Howell, K., Udo, T., Bates, M.E., Vaschillo, E., & Vaschillo, B. Effect of Familial Alcoholism on Physiological Indices of Emotional Regulation. Presented at the American Psychological Association (APA) 118th annual meeting. Boston, MA. August 14-17, 2008.

Howell, K., Udo, T., Bates, M.E., Vaschillo, E., & Vaschillo, B. Familial Alcoholism, Skin Conductance, and Emotional Regulation. Presented at the 3rd Aresty Research Center Undergraduate Research Symposium. Rutgers University, New Brunswick, NJ. April 25, 2008.

Udo, T., Bates, M.E., Vaschillo, E., Vaschillo, B., Lehrer, P., White, H.R., & Robert J. Pandina, R.J. Risk for Substance Use: Emotional Regulation, Sensation Seeking and Depression. Presented at the APA (American Psychological Association) 118th annual meeting, Boston, MA. August 14-17, 2008.

Mun, E.Y., Von Eye, A., Bates, M., Vaschillo, E., Vaschillo, B., Udo, T., Ray, S., & Lehrer, P. Finding Groups Using Model-based Cluster Analysis: Heterogeneous Emotional Self-regulatory Processes and Heavy Alcohol Use Risk. Presented at the Society for Research on Adolescence (SRA) 2008 Biennial Meeting. Chicago, IL. March 6-9, 2008.

Vaschillo E., Vaschillo B., Bates M.E., Lehrer P., France Ch., and Trost Z. Rhythmical Muscle Tension Mimics Heart Rate Variability Biofeedback. Presented at the Association of Applied Psychophysiology and Biofeedback (AAPB) 38th annual meeting. Monterey, CA. February 15-18, 2007. *Applied Psychophysiology and Biofeedback*. 2007, 32(2), 132-133.

Bates, M.E., Vaschillo, E., Vaschillo, B., Udo, T., Lehrer, P., Mun, E.Y., & Ray, S. Neurobiological regulatory mechanisms and diminished cognitive control. Presented at the 3rd Annual NIAAA sponsored pre-conference workshop "Mechanisms of Behavior Change (MOBC) in Behavioral Treatment: Current knowledge and new perspectives," at the Annual Meeting of the Research Society on Alcoholism (RSA). Chicago, IL. July 6, 2007.

Bates, M.E., Mun, E. Y., Vaschillo, E., Vaschillo, B., and Udo, T. Discovery focused hypothesis generation in the experimental study of change mechanisms. Presented in the symposium "Mechanisms of Action Underlying Adult and Adolescent Alcohol Use Disorders (AUD) Treatments" at the Annual Meeting of the Research Society on Alcoholism (RSA). Chicago, IL. July, 2007.

- Bates, M.E., Vaschillo, E., Vaschillo, B., Udo, T., Lehrer, P., and Ray, S. Physiological Mechanisms that Support Behavioral Flexibility: Alcohol and Placebo Effects on Emotion Regulation. Presented in NIAAA sponsored symposium "Social Neuroscience and Mechanisms of Behavior Change," at the Annual Meeting of the Association of Psychological Science. May 26, 2007.
- Udo, T., Bates, M.E., Vaschillo, E., Vaschillo, B., Ray, S., and Mun, E.Y. Gender Differences in the Effects of Alcohol on Emotional Response in Social Drinkers. Presented at the 15th annual meeting of the Society for Prevention Research (SPR), Washington, D.C. May 30-June 1, 2007.
- Udo, T., Bates, M.E., Vaschillo, E., Vaschillo, B., Ray, S., and Mun, E.Y. Gender Differences in the Effects of Alcohol on Emotional Regulation in Social Drinkers. Presented at the 69th annual meeting of the College on Problems of Drug Dependence (CPDD), Quebec City, Canada. June 16-21, 2007.
- Vaschillo E., Vaschillo B., Bates M.E., Lehrer P., Udo T., Ray S., and Pandina R. Heart Rate Parameters to Evaluate Alcohol Challenge and Placebo Effects. Presented at the 46th annual meeting of the Society for Psychophysiological Research (SPR). Vancouver, Canada. October 26-29, 2006. *Psychophysiology*, v. 43, 2006, suppl. 1, p. 101.
- Karavidas M., Lehrer P., Vaschillo E., Vaschillo B., Lu S-E., Karavidas P. The Use of Physiological Measurement in the Assessment of Flight Task Difficulty under Simulated Conditions. Presented at the 46th annual meeting of the Society for Psychophysiological Research, Vancouver, Canada. October 26-29, 2006. *Psychophysiology*, v. 43, 2006, suppl. 1, p. 50.
- Vaschillo E., Vaschillo B., Bates M.E., Pandina R., Ray S., Udo T., and Kingeter J. Some Features of Six Times per Minute Breathing Phenomenon. Presented at the 13th annual meeting of the International Society for Advancement of Respiratory Psychophysiology (ISARP), Newport, RI. October 21-23, 2006. *Biological Psychology* (in press).
- Karavidas M., Lehrer P., Vaschillo E., Vaschillo B. Prevalence of In-flight Hyperventilation among Commercial Pilots. Presented at the 13th annual meeting of the International Society for Advancement of Respiratory Psychophysiology (ISARP), Newport, RI. October 21-23, 2006. *Biological Psychology* (in press).
- Bates M.E., Vaschillo E., Vaschillo B., Udo T., Ray S., and Pandina R.J. Heart Rate and Skin Conductance Variability: New Measures of Autonomic Reactivity to Emotional and Drug Related Stimuli. Presented at the 14th annual meeting of SPR (Society for Prevention Research). San Antonio, TX. May 31-June 2, 2006.
- Vaschillo E., Vaschillo B., Lehrer P., Bates E. M., and Pandina R. Resonant Properties of the Body's Functional Systems and Biofeedback. Presented at the 37th annual meeting of the Association for Applied Psychophysiology and Biofeedback, Portland, Oregon. April 6-9, 2006. *Applied Psychophysiology and Biofeedback*, 2007, 32(1), 60-61.
- Vaschillo E., Vaschillo B., Bates M.E., Lehrer P., Pandina R., Ray S., and Udo T. Heart Rate Resonance Features Do Not Depend on Respiration. Presented at the 12th annual meeting of the International Society for Advancement of

Respiratory Psychophysiology (ISARP), Hamburg, Germany. September 14-16, 2005. *Biological Psychology*, 2007, 75, p. 212-213.

Lehrer P., Vaschillo E., Lu, S-E, Eckberg D., Vaschillo B., Scardella A., Habib R. Heart Rate Variability Biofeedback: Effects of Age on Heart Rate Variability, Baroreflex Gain, and Asthma. Presented at the 12th annual meeting of the International Society for Advancement of Respiratory Psychophysiology (ISARP), Hamburg, Germany. September 14-16, 2005. *Biological Psychology*, 2007, 75, p. 213.

Karavidas M., Lehrer P., Vaschillo E., Vaschillo B. Preliminary results of an uncontrolled 10-week Heart Rate Variability (HRV) Biofeedback treatment of Major Depressive Disorder (MDD). Presented at the 12th annual meeting of the International Society for Advancement of Respiratory Psychophysiology (ISARP), Hamburg, Germany. September 14-16, 2005. *Biological Psychology*, 2007, 75(2), p. 212.

Vaschillo E., Vaschillo B., Lehrer P., Bates M.E., Ray S., Udo T., and Pandina R. Using Heart Rate Variability to Evaluate Response to Drug-related Stimuli: A new approach. Presented at the 45th annual meeting of the Society for Psychophysiological Research, Lisbon, Portugal. September 21-24, 2005. *Psychophysiology*, v. 42, 2005, suppl. 1, p. 125.

Lehrer P.M., Vaschillo E., Vaschillo B., Lu S., Scardella A., Siddique M., and Habib R. Biofeedback Treatment for Asthma. *Applied Psychophysiology and Biofeedback*. 2005 June; 30(2):160.

Bates, M.E., Vaschillo, E., Ray, S., Vaschillo, B., Udo, T., Lehrer, P., Pandina, R.J. Autonomic Reactivity and Memory for Emotional and Drug Related Stimuli. Invited talk at the 2nd East-West Conference on Tobacco and Alcohol: Culture, Environment, and Genes. Pasadena, CA. April 5-6, 2005.

Bates, M., Lehrer, P., Vaschillo, E., Vaschillo, B., Pandina, R., Ray, S., and Buckman, J. Emotion and self-regulation. Presented at the 13th annual meeting of SPR (Society for Prevention Research). Washington D.C. May, 2005.

Bates, M.E., Lehrer, P., Vaschillo, E., Udo, T., Ray, S., Vaschillo, B., Pandina, R., and Weissman, A. Alcohol and Self-Regulation. Presented at the Annual Meeting of the Research Society on Alcoholism (RSA). Santa Barbara, CA. June 28, 2005. *Alcoholism: Clinical and Experimental Research*, 29, 66A.

Vaschillo, E., Vaschillo, B., Lehrer, P., Bates, M., & Pandina, R. Heart Rate Variability in Evaluating Emotional Response to Drug-related Stimuli. Presented at the Annual Psychiatry Poster Session, University of Dentistry and Medicine/Robert Wood Johnson Medical School. Piscataway, NJ. April 26, 2005.

Karavidas M., Lehrer P., Vaschillo E., Vaschillo B. Heart Rate Variability (HRV) Biofeedback in the Treatment of Major Depressive Disorder. *Applied Psychophysiology and Biofeedback*. 2005. 30(4), 409. Proceedings of the 36th AAPB annual meeting, 2005.

Lehrer, P., Vaschillo, E., Vaschillo, B., Lu, S., Scardella, A., Habib, R., Hamer, R., Hochron, S., Eckberg, D., and Kuusela, T. A Nondrug (Biofeedback) Treatment for Asthma. Abstracts from the 10th annual meeting of ISARP. *Biological Psychology* 67, 2004. 401-425.

- Hassett, A.L., Radvanski, D.C., Vaschillo, E., Vaschillo, B., Lehrer, P.M. Trial of Heart Rate Variability Biofeedback in Fibromyalgia. Presented at the annual meeting of International Society for Myofascial Pain and Fibromyalgia. Munich, Germany. July, 2004.
- Vaschillo B., Vaschillo E.G., McLaughlin J., Vickroy M., Bergen M.T., and Servatius R.J. Psychophysiological Characteristics of Aversive Sounds. Annual Research Poster Session at Psychiatry Department of UMDNJ. Piscataway. April 29, 2004.
- Vaschillo E.G., Vaschillo B., Bergen M.T., McLaughlin J., and Servatius R.J. The Role of Infrasonic Components in Sound Aversiveness. Annual Research Poster Session at Psychiatry Department of UMDNJ. Piscataway. April 29, 2004.
- Radvanski, DC, Vaschillo, E., Vaschillo, B., Hassett, AL, Sigal, LH, Lehrer, PM. A 10- Session Trial of Heart Rate Variability Biofeedback in Fibromyalgia. AAPB, 35th Annual Meeting, 2004.
- Crabbe JB, Vaschillo B, Vaschillo E, Servatius R (2003) Development of Aversive Audible Sounds. Presented at Mines, Demolitions, and Non-Lethal Weapons Conference and Exhibition, New Orleans, Louisiana.
- McLaughlin J, Beck KD, Vaschillo E, Vaschillo B, Servatius RJ (2003) Humans and rats differ! Women acquire an eyeblink conditional response slower during the ovulatory phase. Presented at RUTGERS-UMDNJ–NJIT Integrative Neuroscience Minisymposium, Newark, NJ.
- Vaschillo EG, Vaschillo B, Bergen MT, McLaughlin J, Servatius RJ (2003) Aversive quality of sounds: Role of Infrasonic Components. Presented at the 43rd Annual Meeting of the Society for Psychophysiological Research, Chicago, IL.
- Vaschillo B, Vaschillo E, McLaughlin J, Vickroy M, Bergen MT, Servatius RJ (2003) Aversive quality of sounds: Psychophysiological characteristics. Presented at the 43rd Annual Meeting of the Society for Psychophysiological Research, Chicago, IL.
- Lehrer, P, Vaschillo, E., Vaschillo, B, & Gevirtz, R. Cardiovascular Resonant Frequency Biofeedback. Presented at the 34-th annual meeting of the Association for Applied Psychophysiology and Biofeedback. Jacksonville, FL, March 25-30, 2003.
- Lehrer, P., Vaschillo, E., Shou-En Lu, S-E., Vaschillo, B., Scardella, A., and Siddique, M. Neuroplasticity of the baroreflex demonstrated by biofeedback training to increase heart rate variability amplitude. (Society for Psychophysiological Research, meeting in Washington. Oct 2-6, 2002).
- Lehrer, P., Vaschillo, E., Scardella, A., Siddique, M., Vaschillo B., Shau, L., Hochron, S., & Habib, R. Heart rate variability biofeedback reduced respiratory impedance in asthma. American Journal of Respiratory & Critical Care Medicine, 165 Supplement, B3, 2002.
- Lehrer, P., Gevirtz, R., Vaschillo, E., & Vaschillo, B. Cardiovascular Resonant Frequency Biofeedback. Presented at the 33-nd annual meeting of the Association for Applied Psychophysiology and Biofeedback. Las Vegas, Nevada, March 22-24, 2002.

Varughese, N.A., Lehrer, P., Vaschillo, B., and Vaschillo, E. Effects of Heart Rate Variability Biofeedback on Asthma Severity. RWJMS Research Day, March 22, 2002.

Lehrer, P., Vaschillo, E.G., Lu, S.E., Vaschillo, B., Scardella, A.T., & Siddique, M. Neuroplasticity of the Baroreflex Demonstrated by Biofeedback Training to Increase Heart Rate Variability Amplitude. *Psychophysiology*. 2001. 39(S7-S7).

Workshops and symposiums

Vaschillo, E.G., Vaschillo, B., & Buckman, J.F. Using rhythmical sighing to test mechanisms of regulation in the baroreflex system. Presented as oral platform presentation in the symposium at the 26th Annual Meeting of the International Society for the Advancement of Respiratory Psychophysiology (ISARP). Vevey, Switzerland. October 4-6, 2019.

Lehrer, P., Wamboldt, F., Kaur, K., Singer, M., Sharma, A., Sayed, O., Vaschillo, E., Vaschillo, B., & Gevirtz, R. Results of a five-year two-center trial of HRV biofeedback to treat asthma. Presented in the symposium at the 47th Annual Meeting of the Association for Applied Psychophysiology and Biofeedback (AAPB). Seattle, WA. March, 9-12, 2016.

Bates, M.E., Buckman, J.F., Vaschillo, E., Vaschillo, B. & Eddie, D. A transdisciplinary approach to the study of integrated cognitive and physiological processes. Paper presented at the symposium “Using cognitive science to improve behavioral treatment for persons with substance use disorders” at the Inaugural International Convention of Psychological Science. Amsterdam, Netherlands. March 13, 2015.

Vaschillo, E., Vaschillo, B., Buckman, J., Heiss, S., and Bates, M. Sigh to restore respiratory variability. Proposed mechanism. Presented in the symposium of the International Society for the Advancement of Respiratory Psychophysiology (ISARP) at the annual meeting. New Brunswick, NJ. September 19-21, 2014.

Bates, M.E., Buckman, J., Vaschillo, B., Vaschillo, E., Epstein, E., Eddie, D. Alcohol, Stress Resilience, and Neurocardiac Signaling: Gender Differences and Implications for Addiction Treatment. Paper presented in the symposium “Exploring stress as a multi-system, multi-dimensional response: Sex specificity and treatment implications” at the second international congress on *Alcoholism and Stress: A Framework for Future Treatment Strategies*. Volterra, Italy. May 7, 2014.

Bates, M., Epstein, E., Vaschillo, B., Vaschillo, E., Buckman, J., Eddie, D., & Nguyen, T. Reductions in Drinking Parallel Increases in Baroreflex Sensitivity Following Cognitive Behavioral Therapy. Presented in the symposium of the American Psychological Association (APA) at the 121st Annual Convention. Honolulu, Hawai'i. July 31, 2013.

Lehrer, P., Buckman, J., Vaschillo, E., Vaschillo, B., Udo, T., Mun, E.Y., Bates, M. Dysfunctional breathing predicts negative emotion and substance abuse problems. Presented in the symposium of the Association for Applied

Psychophysiology and Biofeedback (AAPB). Baltimore, Maryland. March 10, 2012.

Lehrer, P., Vaschillo, E., Vaschillo, B. Heart Rate Variability Biofeedback. AAPB (Association for Applied Psychophysiology and Biofeedback) Workshop. National Jewish Hospital. Denver, Colorado. June 11-12, 2010.

Vaschillo, E.G., Vaschillo, B., Buckman, J.F., Bates, M.E., and Pandina, R. J. Resonances in the Cardiovascular System: Investigation and Clinical Applications. Presented in the symposium of the International Conference on Bio-inspired Systems and Signal Processing (BIOSIGNALS 2010). 2010, Jan.

Lehrer, P., Vaschillo, E., Vaschillo, B., Udo, T., Mun, E.Y., Ray, S., and Buckman, J. Psychological Correlates of Respiratory Responses and Their Relationship to Anxiety and Drug/Alcohol Risk. Presented in the symposium of International Society for the Advancement of Respiratory Psychophysiology (ISARP). 16th Annual Meeting, October 25-27, 2009, Berlin, Germany.

Vaschillo, E.G. and Vaschillo, B. Transfer Function of the Heart Rate Control System with Respiratory Input. The Classical Engineering Approach. Presented in the symposium of the Second International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC 2009). Porto, Portugal, January 14-17, 2009.

Lehrer, P., Vaschillo, E., Vaschillo, B., Karavidas, M. Biofeedback Training to Increase Heart Rate Variability. Workshop given at the Fall Conference 2008 of the Northeast Regional Biofeedback Society and the Rutgers University Graduate School of Applied and Professional Psychology and the Center for Applied Psychology. New Brunswick, NJ, November 1, 2008.

Lehrer, P., Vaschillo, E., Vaschillo, B., von Scheele, Bo. Heart Rate Variability: Basics and Applications. Workshop given at the 1st meeting of the Baltic Society for Integrated Psychophysiology. Soderhamn, Sweden, September 16, 2008.

Vaschillo, B., Vaschillo, E. Estimation and Correction of the Nervous System Strain. Presented in the symposium "Assessment and Treatment of Stress-related Disorders," at the 1st meeting of the Baltic Society for Integrated Psychophysiology. Soderhamn, Sweden, September 15, 2008.

Vaschillo, B., Vaschillo, E. Resonances in the Cardiovascular System. Presented in the symposium "Heart Rate Variability: Theory and Applications," at the 1st meeting of the Baltic Society for Integrated Psychophysiology. Soderhamn, Sweden, September 15, 2008.

Bates, M.E., Vaschillo, E., Vaschillo, B., Udo, T., Lehrer, P, and Ray, S. Physiological Mechanisms that Support Behavioral Flexibility: Alcohol and Placebo Effects on Emotion Regulation. Paper presented in NIAAA sponsored symposium "Social Neuroscience and Mechanisms of Behavior Change," at the Annual Meeting of the Association of Psychological Science, May 26, 2007.

Bates, M.E., Vaschillo, E., Vaschillo, B., Udo, T., Lehrer, P, Mun, E.Y. and Ray, S. Neurobiological Regulatory Mechanisms and Diminished Cognitive Control. Paper presented at the 3rd Annual NIAAA sponsored pre-conference workshop "Mechanisms of Behavior Change (MOBC) in Behavioral

Treatment: Current knowledge and new perspectives,” at the Annual Meeting of The Research Society on Alcoholism. Chicago, IL, July 6, 2007.

Bates, M.E., Mun, E. Y., Vaschillo, E., Vaschillo, B., and Udo, T. Discovery Focused Hypothesis Generation in the Experimental Study of Change Mechanisms. Presented in the symposium “Mechanisms of Action Underlying Adult and Adolescent Alcohol Use Disorders (AUD) Treatments,” at the Annual Meeting of the Research Society on Alcoholism (RSA). Chicago, IL. July, 2007.

Lehrer, P, Vaschillo, E., Vaschillo, B, & Gevirtz, R. Cardiovascular Resonant Frequency Biofeedback. Workshop presented at the 34-th annual meeting of the Association for Applied Psychophysiology and Biofeedback. Jacksonville, FL, March 25-30, 2003.

Lehrer, P., Gevirtz, R., Vaschillo, E., & Vaschillo, B. Cardiovascular Resonant Frequency Biofeedback. Workshop presented at the 33-nd annual meeting of the Association for Applied Psychophysiology and Biofeedback. Las Vegas, Nevada, March 22-24, 2002.

Patents

Vaschillo, EG & Vaschillo B. Method and Apparatus for Express Estimation of the Arterial Elastic Property in a Person. Rutgers Office of Research and Economic Development. Provisional patent, Fox Ref. No.: 070439.01278, 2017.

Vaschillo, EG & Vaschillo B. RU Docket No.: 2017-039 - Methods and Apparatus for Express Estimation of the Arterial Elastic Property in a Subject - 070439.01364 - submitted to the USPTO, April, 2018.

Research support

Ongoing Research Support

R01 AA027017 (NIH/NIAAA) (Multi-PI: Jennifer F. Buckman, Ph.D.& Evgeny G. Vaschillo, Ph.D.) 09/15/18-06/30/23

Role in Project: co-investigator. September 15, 2018 – June 30, 2023.

“Changes in Cardiovascular Control Mechanisms Related to Binge Drinking during College”.

Project proposes a five-year longitudinal study of the cumulative effects of binge drinking on cardiovascular (CV) control systems in college students. The strong scientific premise rests on solid empirical evidence that chronic drinking is associated with negative CV outcomes starting in midlife, and the application proposes an innovative and important look at whether and how the processes underlying that link are initiated (and can be detected) much earlier in life.

R01AA023667 (NIH/NIAAA) (Multi-PI: Marsha E. Bates, Ph.D., Jennifer F. Buckman, Ph.D.)

Role in Project: co-investigator. February 15, 2015 - January 31, 2020.

"Project IMPACT: In-the-Moment Protection from Automatic Capture by triggers"

This Project is aimed to perform a randomized clinical trial of a baroreflex (BAR)-based intervention (added to behavioral treatment as usual) along with laboratory assessments in a pre-post intervention design. Computational modeling will be carried out to validate the operation of the BAR as a biobehavioral change mechanism.

R34 DA043751-01A1 (NIH) (Principal Investigator, Teresa Leyro, Ph.D.)

Role in Project: co-investigator. September 15, 2018 – July 31, 2021.

“Development and Pilot Investigation of Heart Rate Variability Biofeedback (HRVB) for Smoking Cessation”

The project aims to develop and assess the feasibility and potential effectiveness of a heart rate variability biofeedback treatment adjunct for smokers with elevated emotional distress; by augmenting cardiac vagal activity, the intervention seeks to promote automatic visceral behavioral and emotional regulation.

Completed Research Support

1R21AA020367-01A1 (NIH-NIAAA) (Principal Investigator, Evgeny G. Vaschillo, Ph.D.)

Role in Project: co-investigator. February 5, 2012 - January 31, 2015.

"Examining the vascular tone baroreflex as a target for alcohol use intervention."

This Project is aimed to investigate the vascular tone baroreflex as a physiological mechanism that links the vascular actions of alcohol to adaptive behavior change and as a putative target for developing non-invasive, non-pharmacological tools to intervene in maladaptive alcohol use behaviors.

NJ CBIR14IRG020 (Principal Investigator, Jennifer Buckman, Ph.D.)

Role in Project: key personnel. June 15, 2014 - May 31, 2017.

"Validating HRV as an objective clinical measure of TBI symptom severity and recovery to inform physicians' return-to-play decisions."

This project measures heart-brain signaling following a sports-related TBI to improve predictions of symptom recovery and add neurocardiac evidence to support clinical return-to-play decisions.

R03 DA031060 (NIH/NIDA) (Principal Investigator, Marsha E. Bates, Ph.D.)

Role in Project: co-investigator. July 1, 2011 - June 30, 2014.

"Marijuana Cues, Arousal and the Central Autonomic Network."

This Project goals are to examine interconnected brain region activation in response to alcohol-related picture cues, the dynamic relation between neural activation and cardiovascular modulation, and to explore whether an experimental manipulation of slow breathing that produces a generalized inhibitory effect on the brain can be used to modulate alcohol cue reactivity.

Administrative supplement to 1R01AA017163-01A1 (NIH-NIAAA, Principal investigator, Elizabeth Epstein, Ph.D.)

Role in Project: co-investigator. September 1, 2010 – March 31, 2013.

“Testing CBT Models and Change Mechanisms for Alcohol Dependent Women.”

The purpose of the supplement is to adopt a more translational approach to test treatment models for alcohol use problems in women, by adding assessment of biologically-based mechanisms of change at multiple levels of analyses. The project adds a biological dimension to the clinical study by recording pre-post treatment physiological changes and assessing heart rate variability as a background state and as induced by a paced breathing exercise at resonance frequency of the CVS. NIAAA-09-07 Contract: HHSN275201000003C (Principal Investigator, Marsha E. Bates, Ph.D.)
Role in Project: co-investigator. April 1, 2010 – March 31, 2013.

“Multi-Scale Neurophysiological Control Systems of Mechanisms of behavior Change initiation (MOBCI).”

Project’s goal is to quantitatively model adaptive neurobiological subsystems that regulate physiological arousal and its expression to the environment, and to relate subsystem control to drinking behaviors and alcohol risk.

Colgate-Palmolive Contract: CP 7500739219 (Principal Investigator, Eun-Young Mun, Ph.D.)

Role in Project: co-investigator. November 15, 2010 – January 15, 2012.

“Emotional and Stress Response to Sensory Stimulation.”

This Project is designed to understand how individuals respond to tactile and olfactory stimuli using a comprehensive assessment approach, including physiological and hormonal indices.

1 R01 HL089495-01A2 (NIH-NHLBI, Principal Investigator, Paul Lehrer, Ph.D.)

Role in Project: co-investigator. February 1, 2010 – January 31, 2015.

“Heart Rate Variability Biofeedback: Its Role in Asthma Therapeutics.”

Project investigates the effects of heart rate variability biofeedback as a treatment for steroid naïve patients with mild or moderate persistent asthma.

Administrative Supplement to R01AA015248 “Alcohol, Memory and Affective Regulation.”

(Principal Investigator, Marsha E. Bates, Ph.D.) July 1, 2009 – June 30, 2010. Role in Project: study coordinator.

This supplement is directly testing whether visual stimulation that increases HRV also causes baroreflex gain, reflecting improved self-regulation capacity.

1 R01 AA0 15248 – 01 (Principal Investigator, Marsha E. Bates, Ph.D.)

Role in Project: study coordinator. July 1, 2004 – June 30, 2010.

“Alcohol, Memory, and Affective Regulation.”

Project investigated the effect of alcohol challenge on explicit and implicit memory, and psychophysiological responses for emotionally valenced, alcohol, and drug related stimuli in participants with and without family history of alcoholism.

P20 DA017552 – 02 (Principal Investigator, Robert Pandina, Ph.D.)

Role in Project: study coordinator. September 30, 2003 – September 30, 2009.

“Drug Abuse Prevention during Developmental Transitions”, Project 3:

“Memory Processes, Emotional Regulation, and Developmental Stage of Drug Exposure.”

Project investigated relationships between memory processes, emotional and physiological self-regulation, and developmental stages of drug exposure by utilizing adolescents in 3 developmental stages of drug exposure (individuals transiting from middle school to high school; high school to college; and a group of chronic alcoholics).

FAA project, grant # 05-G-004 (Principal Investigator, Paul Lehrer, Ph.D.)

Role in project: co-investigator. April 1, 2005 – September 30, 2007.

“Development of an Objective Assessment Tool for Evaluating Tasks under Simulated Flight Conditions.”

Project’s goal was to perform a preliminary evaluation of psychophysiological measures as an aid in assessing flight task difficulty and work load in a flight simulator. The primary aim was to determine whether psychophysiological assessment added predictive power over a self-report instrument frequently used for this purpose and NASA’s TLX scale.

1R01HL58805-01A1 (Principal Investigator, Paul Lehrer, Ph.D.)

Role in project: study coordinator. May 1, 1999 - April 30, 2002.

“Respiratory Sinus Arrhythmia Biofeedback for Asthma Treatment.”

This project investigated the effects of biofeedback to increase amplitude of respiratory sinus arrhythmia as a treatment for asthma. It also investigated the effects of this procedure on baroreflex gain, amplitude of heart rate and blood pressure oscillations, and various other psychophysiological indices both among asthma patients and healthy subjects.

Professional contributions.

Development and implementation a Stress-management Program for Rutgers students-athletes based on Heart Rate Variability Biofeedback training. 2007 -2008.

Implementation of a new physiological approach for alcohol studies. Method is based on cardiovascular resonance response to rhythmical stimuli, and is sensitive to characterize emotional regulation. Approach described in paper published in “Psychophysiology” journal (2008, Sep; 45(5): 847-858). 2005 - 2007.