

**Evgeny G. Vaschillo, Ph.D.**

## **Awards and Certifications**

2019

Named as Honorary Fellow for a lifetime significant contributions to the Association for Applied Psychophysiology and Biofeedback and the Field Study (Awarded March 15, 2019)

2018

2018 AAPB Distinguished Scientist Award (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: principal 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 bio behavioral 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**

R121AA020367-01A1 (NIH-NIAAA) (Principal Investigator, **Evgeny G. Vaschillo, Ph.D.**)

**Role in Project: principal 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.

## Patents

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.

Vaschillo, EG & Rische, ND. Therapeutic Method for a Human Subject. United State Patent Number: 5,997,482. Date of Patent Dec. 7, 1999.

## Peer-Reviewed Publications

Lehrer, P.M., Vaschillo, E.G. & Vidali, V. Heart Rate and Breathing Are Not Always in Phase During Resonance Frequency Breathing. *Appl Psychophysiol Biofeedback* (2020). <https://doi.org/10.1007/s10484-020-09459-y>.

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.

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 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.

Buckman, J.F., Vaschillo, E.G., Fonoberova, M., Mezic, I., and Bates, M.E. The Translational Value of Psychophysiology Methods and Mechanisms: Multi-Level, Dynamic, Personalized. *J. Stud. Alcohol Drugs*. 2018; 79, 229–238.

Eddie, D., Bates, M.E., Vaschillo, E.G., Lehrer, P.M., Retkwa, M. & Miuccio, M. Rest, Reactivity and Recovery: A Psychophysiological Assessment of Borderline Personality Disorder. 2018. *Front. Psychiatry* 9:505. doi: 10.3389/fpsyt.2018.00505.

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.

## **Convention presentations and abstracts**

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

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, C.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.