BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors. Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Richard A. Winett

eRA COMMONS USER NAME (credential, e.g., agency login): RSWINETT

POSITION TITLE: Heilig Meyers Professor of Psychology

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE (if applicable) | Completion Date MM/YYYY | FIELD OF STUDY |
|---|------------------------------|-------------------------------|----------------|
| Queens College of the City of New York University | B.S. | 12/15/1966 | Psychology |
| Stony Brook University | Ph.D. | 06/1/1971 | Psychology |

A. Personal Statement: The major aim of this R 34 project to build upon the theoretical approach and clinical outcomes produced by the NIDDK supported 'Resist Diabetes' (R-D) efficacy study (Multiple PI's B. Davy and R. Winett) by demonstrating that our prior intervention can readily be translated into the Veterans Administration System care system and produce meaningful health related outcome for veterans. The R-D study focused on initiating and then maintaining resistance training in previously inactive adults, 50-69 yrs, who were overweight to obese (BMI 25.0-39.9) and were prediabetic. The supervised initiation phase, and then transition and maintenance phases, all revolved around social cognitive theory (SCT) based constructs and procedures including mastery experiences (modeling, practice, feedback, enactment) and self-regulation (planning, goal setting, monitoring, reporting, feedback, and problems/strategies). The R-D study showed through tracking and analyses that a high fidelity intervention was enacted and that resistance training can be safely initiated and then maintained with minimal supervision, and that at post, and follow-up assessment points between 30% to 34% of participants were normoglycemic. In the R-D study we showed that resistance training following our protocol was very safe (only 4 non-life threatening adverse events in ~12,500 workouts) and that the intervention worked through its prescribed SCT mechanisms. An important and next logical step is to maintain the essential components and theoretical base of the intervention and work within large health care system. The Veterans Administration System, to ascertain if the overall approach is readily translatable, can produce similar clinical outcomes to the efficacy study, and even improve on the outcomes of more usual follow-up approaches in the health care system. The overall approach taken by Dr. Davy is consistent with my interests in both clinical science and health behaviors, a more individual perspective, and public health, a population perspective focused on settings and systems. I have a broad background as a principal investigator in primarily NIH supported theorybased, health behavior interventions from large community based prevention trials, to secondary prevention clinical interventions, to entirely web-based secondary prevention trials. The SCT based interventions most often revolved around mastery experiences and self-regulation strategies including monitoring, goal setting, planning, and problem solving. For about the last 16 years, this research has focused on nutrition, exercise, and physical activity, working with colleagues in different disciplines and developing my own knowledge base in exercise science and nutrition. Also, 16 years ago, I detailed the many potential health related benefits of resistance training which then was primarily seen as a vehicle to

increase strength and maintain muscle mass rather than representing an important component of preventive health interventions with a different focus than more traditional interventions. I am one of the few psychologists focused on resistance training as a health behavior intervention. Moreover, in different interventions I have developed, consistent with this application, all the protocols were within theory based interventions that had extended personal and electronic contacts, and were especially aimed at maintenance of behavior changes. My record of research shows that I am well positioned to contribute to this overall project.

- 1. Winett RA, Carpinelli RN. Examining the validity of exercise guidelines for the prevention of morbidity and all-cause mortality. *Annals of Behavioral Medicine.* 2000; *22*; 237-245. PMID: 11126469.
- 2. Winett RA, Tate DF, Anderson ES, Wojcik JR, Winett SG. Long-term prevention of weight gain: A theoretically-based internet approach. *Preventive Medicine*.2005; *49*: 629-641.PMID 15917062
- Winett, RA, Davy BM, Marinik, EL, Savla J, Winett SG, Phillips SM, Lutes LD. Developing a new treatment paradigm for disease prevention and healthy aging. *Translational Behavioral Medicine*.2014; 4: 117-123. PMID 24653782
- 4. Davy BM, Winett RA, Savla J, Marinik EL, Baugh ME, Flack KD, Halliday TM, Kelleher SA, Winett SG, Williams DM, Boshra S. Resist diabetes: A randomized clinical trial for resistance training maintenance in adults with prediabetes. *PLoS One*. 2017 Feb 23;12(2)

B. Positions and Honors:

Positions and Employment

| 1971-1976 | Assistant Professor, University of Kentucky |
|-----------|--|
| 1976-1979 | Senior Research Associate, Institute for Behavior Research, Washington, DC |
| 1979-1984 | Associate Professor, Virginia Polytechnic Institute and State University |
| 1984-1999 | Professor, Virginia Polytechnic Institute and State University |
| 1999- | Heilig-Meyers Professor of Psychology, Virginia Polytechnic Institute and State University |
| 1986- | Associate Department Head, Virginia Polytechnic Institute and State University |
| 1988-2013 | Director, Center for Research in Health Behavior, Virginia Polytechnic Institute and State Univ. |
| 1996-2012 | Director of Clinical Science Training, Virginia Polytechnic Institute and State University |
| | |

Other Experience and Professional Memberships and Honors

Fellow in five American Psychological Association Divisions Fellow in Society of Behavioral Medicine

<u>Honors</u>

| 1999 | Virginia Tech Alumni Award for Research Excellence |
|------|--|
| 1000 | |

- 1999Heilig-Meyers Professor of Psychology
- 2017 Society for Behavioral Medicine, Career Research Mentoring Award

C. Contributions to Science: (~270 publications, ~12,650 citations, *h* index=58)

- 1. Extending Behavioral Theory and Applications to Diverse Settings and Problems: My earliest research was initially inspired by my graduate program with the intent of expanding behavioral theory and applications well beyond the usual confines of mental health and developmental disabilities problems. I was also focused on ethical considerations and one of my earliest publications is considered a seminal piece in this area. I also was one of the first people to develop what became, and continues to be, behavioral community psychology, combining behavioral theory and applications to the broader concerns of community psychology intervention including the larger reach of interventions.
 - 1. Winett RA, Winkler RC. Current behavior modification in the classroom: Be still, be quiet, be docile. *Journal of Applied Behavior Analysis.* 1972; *5*: 499-504. PMID 16795373
 - Winett RA. Behavior modification and open education. Journal of School Psychology. 1973; 11: 7-14.
 - 3. Winett RA, Nietzel M. Behavioral ecology: Contingency management of residential energy use. American *Journal of Community Psychology*.1974; *3*: 123-133.
 - 4. Nietzel MT, Winett RA, MacDonald M, Davidson W. *Behavioral approaches to community psychology.* Elmsford, NY: 1978; Pergamon Press.

- 2. Extending Behavioral Theory and Applications to Consumer Behaviors: Working both as an individual investigator and in collaboration with other psychologists and behavioral economists, I completed a series of studies and papers showing how behavioral and social cognitive theory (then social learning theory) can be a basis for understanding and changing consumer behaviors from household energy consumption to food purchases and consumption. The NSF supported research demonstrated the efficacy of feedback and goal setting, and how information was framed via modeling principles that were as, or more, effective than usual price change strategies or other strategies adapted from communication science. The efficacy across different behaviors was an important component of this work and the use of video modeling interventions was a forerunner of future work done by myself and other investigators for similar interventions and then computer-based interventions.
 - 1. Winett RA, Kagel J, Battalio R C, Winkler R C. The effects of rebates, feedback, and information on electricity conservation. *Journal of Applied Psychology.* 1978; 63: 73-80.
 - 2. Winkler RC, Winett RA. Behavioral interventions in resource conservation: A systems approach based on behavioral economics. *American Psychologist.* 1982; 37: 421-435.
 - 3. Winett RA, Hatcher J, Leckliter IN, Fort TR, Fishback JR, Love SQ, Riley AW. The effects of videotape modeling and feedback on residential thermal conditions, electricity consumption, and perceptions of comfort: Summer and winter studies. *Journal of Applied Behavior Analysis*. 1982; 15: 381-402. 16795658
 - 4. Winett RA, Kramer KD, Walker WB, Malone SW, Lane MK. The effects of videotape, participant modeling, and feedback on nutritious and economical food purchases. *Journal of Applied Behavior Analysis.* 1988; *21*: 73-80. PMID 16795714
- 3. Large Scale Prevention Interventions. Working within a social cognitive theory, social diffusion based intervention model, and emblematic of how health psychology and public health theory and approaches can be merged, I was one of the investigators within a team that developed and implemented HIV interventions in different settings for gay men, women living in subsidized housing, and teens living in such housing. The interventions showed a reduction in risk behaviors and have been subsequently used in a number of countries. A similar model was used in our large church based intervention that focused on improving the nutrition and physical activity behaviors of diverse congregants from different church denominations and then maintaining those behaviors over an extended follow-up period. These HIV and then church-based intervention. The church based intervention included an individual change component which was a tailored, web-based program that subsequently became the basis for one of the first completely 'stand-alone' SCT web-based intervention that showed maintenance of changes in nutrition and physical activity behaviors.
 - 1. Winett R A, King A C, Altman D. (1989). *Health psychology and public health: An integrative approach.* Elmsford, NY: Pergamon Press.
 - Kelly J A, Murphy D A, Sikkema K J, McAuliffe TL, Roffman RA, Solomon LJ, Winett RA, Kalichman SC, & The Community HIV Prevention Research Collaborative. Outcomes of a randomized, controlled community-level HIV prevention intervention: Effects on behavior among atrisk gay men in small U.S. cities. *The Lancet.* 1997; *350*: 1500 –1505. PMID 9388397
 - 3. Winett RA, Anderson ES, Wojick JR, Winett SG, Bowden T. Guide to health: nutrition and physical activity outcomes of a group-randomized trial of an internet-based intervention in churches. *Annals of Behavioral Medicine.* 2007; *33*: 251-261. PMID: 17600452
 - 4. Winett RA, Anderson ES, Wojcik JR, Winett SG, Moore S, Blake C. Guide to Health: A randomized controlled trial of the effects of a completely web-based intervention on physical activity, fruit and vegetable consumption, and body weight. *Translational Behavioral Medicine*. 2011; *1, 165-174*. PMID 23503089
- 4. Social Cognitive Theory, Resistance Training, and Health Outcomes: I was one of the first, and continue to be one of the few, psychologists to not only appreciate the many health benefits of resistance training, but also to see that efficacious interventions with resistance training particularly outside of a supervised context, required not only effective exercise protocols but also effective, theory-based behavioral interventions to maintain behaviors. The more empirical work in this area with

colleagues from different disciplines has come to fruition and appears sufficiently efficacious to focus on translation of our approach to practice.

1. Winett RA, Carpinelli RN. Potential health-related benefits of resistance training. *Preventive Medicine*. 2001; 33, 503-513. PMID: 11676593

2. Winett RA, Williams DM, Davy BM. Initiating and maintaining resistance training in older adults: A social cognitive theory-based approach. *British Journal of Sports Medicine*. 2009; *43*: 114-119. PMID: 18628361

3. Phillips SM, Winett RA. Uncomplicated resistance training and health-related outcomes: Evidence for a public health mandate. *Current Sports Medicine Reports.* 2010; *9*: 208-213. PMID: 2062253

4. Winett RA, Davy BM, Savla J., Marinik EL, Kelleher SA, Winett SG, Halliday TM., Williams D M. Theory-based approach for maintaining resistance training in older adults with prediabetes: Adherence, barriers, self-regulation strategies, treatment fidelity, costs. *Translational Behavioral Medicine*. 2015; 5: 149-159. PMID 26029277

D. Research Support Completed Research Support

1R01DK082383-01A1Brenda Davy and Richard Winett (Multiple PI's)8/01/09 - 7/31/15NIDDK

Maintaining resistance training in older prediabetic adults: theoretical approach.

The aim of this Phase II Clinical Trial was to demonstrate the efficacy of social cognitive theory based intervention for initiating, and most importantly, maintaining resistance training outside a supervised context in older adults with pre-diabetes (i.e., impaired glucose tolerance or impaired fasting glucose) to improve blood glucose regulation.

Role: PI (Multiple PI)