

<b>Fiscal Year:</b>	FY 2015	<b>Task Last Updated:</b>	FY 08/11/2015
<b>PI Name:</b>	Perlman, Greg		
<b>Project Title:</b>	Personality and Biological Predictors of Resiliency to Chronic Stress Among High-Achieving Adults		
<b>Division Name:</b>	Human Research		
<b>Program/Discipline:</b>			
<b>Program/Discipline--Element/Subdiscipline:</b>	HUMAN RESEARCH--Behavior and performance		
<b>Joint Agency Name:</b>		<b>TechPort:</b>	No
<b>Human Research Program Elements:</b>	(1) <b>HFBP</b> :Human Factors & Behavioral Performance (IRP Rev H)		
<b>Human Research Program Risks:</b>	(1) <b>BMed</b> :Risk of Adverse Cognitive or Behavioral Conditions and Psychiatric Disorders		
<b>Space Biology Element:</b>	None		
<b>Space Biology Cross-Element Discipline:</b>	None		
<b>Space Biology Special Category:</b>	None		
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<b>Zip Code:</b>	11794-3365	<b>Congressional District:</b>	1
<b>Comments:</b>			
<b>Project Type:</b>	GROUND	<b>Solicitation / Funding Source:</b>	2014-15 HERO NNJ14ZSA001N-Crew Health-OMNIBUS
<b>Start Date:</b>	07/01/2015	<b>End Date:</b>	06/30/2016
<b>No. of Post Docs:</b>		<b>No. of PhD Degrees:</b>	
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<b>No. of Master's Candidates:</b>		<b>No. of Bachelor's Degrees:</b>	
<b>No. of Bachelor's Candidates:</b>		<b>Monitoring Center:</b>	NASA JSC
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<b>Flight Program:</b>			
<b>Flight Assignment:</b>			
<b>Key Personnel Changes/Previous PI:</b>			
<b>COI Name (Institution):</b>	Kotov, Roman Ph.D. ( State University of New York, Stony Brook ) Proudfit, Greg Ph.D. ( State University of New York, Stony Brook )		
<b>Grant/Contract No.:</b>	NNX15AN96G		
<b>Performance Goal No.:</b>			
<b>Performance Goal Text:</b>			

<b>Task Description:</b>	<p>The objective of this research proposal is to identify the key personality, behavioral, and neurophysiological predictors of resiliency among a population of high-achieving young adults in a high-stress environment. To accomplish this objective, we will recruit 200 adult male and female trainees from nearby highly-demanding medical training programs and research labs, a population analogous to astronauts. During the first visit to our laboratory (Wave 1), we will assess trainees with a comprehensive battery of characteristics relevant to resiliency. Self-report predictors include “Big 5” personality, recently-developed subfacets of the Big 5 (i.e., social closeness, melancholia, self-discipline, etc.), IQ, and behavioral-health scales (i.e., mood, anxiety, support, etc.). Neurophysiological predictors will be assessed using a comprehensive battery designed to measure neural reactivity (i.e., electroencephalogram) during experimental tasks relevant to space mission success (i.e., performance monitoring, vigilance). Resiliency will be measured by self-report behavioral health symptoms (i.e., depression, anxiety, sleep, stress) and behavioral performance on tasks (e.g., accuracy, post-error adjustments, reaction time) at Wave 1 (to establish a baseline) and then monthly for 5 months. This prospective, repeated measures design will allow us to track fluctuations in resiliency during the course of their highly-demanding medical training program. After completing data collection, we will identify the Wave 1 personality, behavioral, and neurophysiological profile that best predicted successful adaption during intensive training (i.e., better mental health and better performance). We will also use innovative statistical methods to develop validity scales to identify "fake good" personality responses.</p> <p>This research proposal aims to elucidate the personality, behavioral, and neurophysiological factors that predict successful adaption to chronic stress among high-achieving young adults in highly demanding contexts. The knowledge gained from this research will aid in the design of a new standardized selection protocol, which could then be streamlined and validated in an astronaut sample in close analogues to space travel.</p>
<b>Rationale for HRP Directed Research:</b>	
<b>Research Impact/Earth Benefits:</b>	
<b>Task Progress:</b>	New project for FY2015.
<b>Bibliography Type:</b>	Description: (Last Updated: 06/22/2016)