

Fiscal Year:	FY 2013	Task Last Updated:	FY 09/25/2014
PI Name:	Cooper, Maya M.S.		
Project Title:	Functional Foods Baseline and Requirements Analysis		
Division Name:	Human Research		
Program/Discipline:			
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Space Human Factors Engineering		
Joint Agency Name:	TechPort:	No	
Human Research Program Elements:	(1) HHC: Human Health Countermeasures		
Human Research Program Risks:	None		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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Comments:			
Project Type:	GROUND	Solicitation / Funding Source:	Directed Research
Start Date:	09/27/2013	End Date:	10/31/2016
No. of Post Docs:	No. of PhD Degrees:		
No. of PhD Candidates:	No. of Master' Degrees:		
No. of Master's Candidates:	No. of Bachelor's Degrees:		
No. of Bachelor's Candidates:	Monitoring Center: NASA JSC		
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Flight Program:			
Flight Assignment:			
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Ferrer, Mike (MEI Technologies) Douglas, Grace Ph.D. (NASA Johnson Space Center)		
Grant/Contract No.:	Directed Research		
Performance Goal No.:			
Performance Goal Text:			
Task Description:	<p>NASA, in planning for long duration missions, has an imperative to provide the necessary nutrition to ensure sustainment of crew health and performance. To this end, the Human Health Countermeasures (HHC) Program has identified several desired nutrients, optimally delivered from food sources, with the potential to benefit health beyond nutritional maintenance. It is expected that these nutrients, and any nutrients identified in the future, will be required to be delivered in the food system to mitigate or prevent health issues, and that determination of compatible formulation, processing, and storage conditions will enable these functional foods to meet shelf life requirements. The purpose of this task is to determine the current concentrations of these previously unmeasured nutrients in the food system and their stability to different processing conditions, formulation matrices, and storage temperatures reflective of potential vehicle architecture to inform functional food capabilities and requirements development for long duration spaceflight.</p> <p>Milestones and Deliverables: The study duration is 3 years. Analysis of existing nutritional data, the assessment of</p>		

	<p>additional nutrients in existing food over time, and characterization of food matrices encompass much of the study and occur concurrently throughout the study. The SharePoint development work will proceed throughout the course of the study with development in the first half and a supported go-live state for the latter part of the study period.</p> <p>At the conclusion of this task, researchers will deliver a baseline assessment of functional foods within the current ISS food system as well as provide requirements for the development of functional foods in the space food system.</p>
Rationale for HRP Directed Research:	This research is directed because it contains highly constrained research.
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2013.
Bibliography Type:	Description: (Last Updated: 04/23/2019)