

Fiscal Year:	FY 2007	Task Last Updated:	FY 09/08/2009
PI Name:	Smith, Scott M Ph.D.		
Project Title:	Vitamin D Supplementation in an Antarctic Ground Analog of Space Flight: Study of Supplementation Protocol and Relationship to Immune System Function		
Division Name:	Human Research		
Program/Discipline:	HUMAN RESEARCH		
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Biomedical countermeasures		
Joint Agency Name:	TechPort:	No	
Human Research Program Elements:	(1) HHC: Human Health Countermeasures		
Human Research Program Risks:	(1) Food and Nutrition: Risk of Performance Decrement and Crew Illness Due to Inadequate Food and Nutrition (2) Nutrition: Risk of Inadequate Nutrition		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
PI Email:	scott.m.smith@nasa.gov	Fax:	FY 281-483-2888
PI Organization Type:	NASA CENTER	Phone:	281-483-7204
Organization Name:	NASA Johnson Space Center		
PI Address 1:	Biomedical Research and Environmental Sciences Division/SK3		
PI Address 2:	2101 NASA Pkwy		
PI Web Page:			
City:	Houston	State:	TX
Zip Code:	77058-3607	Congressional District:	36
Comments:			
Project Type:	GROUND	Solicitation / Funding Source:	Directed Research
Start Date:	10/01/2006	End Date:	09/30/2010
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		
Contact Monitor:	Meck, J@n	Contact Phone:	281-244-5405
Contact Email:	janice.v.meck@nasa.gov		
Flight Program:			
Flight Assignment:			
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Zwart, Sara (USRA/NASA Johnson Space Center) Locke, Jim (NASA Johnson Space Center) Pierson, Duane (NASA Johnson Space Center) Mehta, Satish (NASA Johnson Space Center) Bourbeau, YaVonne (Wyle/NASA Johnson Space Center)		
Grant/Contract No.:			
Performance Goal No.:			
Performance Goal Text:			

Task Description:	We recently completed a ground-based investigation evaluating the efficacy of vitamin D supplementation during the winter months in Antarctica, when UV-B radiation levels are zero. A supplement dose of 2,000 IU/d raised serum 25-hydroxyvitamin D to acceptable levels, but compliance was an issue that needs to be overcome. In this study, we will investigate whether a weekly dose of 10,000 IU vitamin D could be substituted for this daily 2,000-IU dose during the winter months in Antarctica at McMurdo Station. A secondary goal of this study is to investigate the effects of vitamin D supplementation and status on immune function in an environment known to suppress immune function. This ground analog study will enable us to provide long-duration space flight crewmembers with evidence-based recommendations for using a vitamin D supplement to achieve optimal vitamin D status before, during, and after flight.
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2007. [Note: project added September 2009 when received information--editor]
Bibliography Type:	Description: (Last Updated: 05/24/2023)