

Fiscal Year:	FY 2007	Task Last Updated:	FY 04/15/2009
PI Name:	Platts, Steven H. Ph.D.		
Project Title:	Test of Midodrine as a Countermeasure against Postflight Orthostatic Hypotension: SMO-006		
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:	None		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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Organization Name:	NASA Johnson Space Center		
PI Address 1:	Cardiovascular Laboratory		
PI Address 2:	Biomedical Research and Environmental Sciences Division		
PI Web Page:			
City:	Houston	State:	TX
Zip Code:	77058	Congressional District:	36
Comments:			
Project Type:	FLIGHT	Solicitation / Funding Source:	Directed Research
Start Date:	10/01/2006	End Date:	04/30/2009
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:	Shuttle/ISS		
Flight Assignment:	ISS 16, 17 Note deselected in October 2008, per JSC (4/2009)		
Key Personnel Changes/Previous PI:	NOTE that Steven Platts took over as Principal Investigator from Janice Meck in FY2007. See Meck (Principal Investigator) for reports prior to FY2007.		
COI Name (Institution):			
Grant/Contract No.:			
Performance Goal No.:			
Performance Goal Text:			

Task Description:	<p>Many astronauts experience postflight orthostatic hypotension, a condition where the blood pressure drops when an individual stands up, resulting in presyncope (lightheadedness) or syncope (fainting). Approximately 20-30 percent of crews on short-duration (less than 20 days) missions and 83 percent of crews on long-duration missions experience some degree of orthostatic intolerance after return to Earth. To date, the countermeasures tested, such as fluid loading, the use of lower body negative pressure (LBNP), and Fluronef, have not successfully eliminated postflight orthostatic hypotension.</p> <p>On Earth, the drug midodrine has been used extensively to treat low blood pressure. . Midodrine acts as a vasopressor (raise blood pressure) by causing constriction (tightening) of the blood vessels which leads to an increase in blood pressure. Test of Midodrine as a Countermeasure Against Post-flight Orthostatic Hypotension - Short Duration Biological Investigation (Midodrine-SDBI) studies the effectiveness of midodrine for the treatment of postflight orthostatic hypotension.</p> <p>Operational Requirements</p> <p>Crewmembers will ingest 10 milligrams of midodrine between Time of Ignition (TIG) and landing.</p> <p>Operational Protocols</p> <p>Approximately 90-days before flight, the participants will undergo a drug tolerance test for midodrine and will participate in a drug familiarization session. An operational tilt test will be conducted 10-days prior to launch, and the participants will complete a brief questionnaire before they leave the testing room.</p> <p>See also: http://www.nasa.gov/</p>
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	<p>In addition to benefits for astronauts, millions of people on Earth suffer from orthostatic hypotension and may benefit from information gained from this experiment.</p>
Task Progress:	<p>No report received this reporting period. Task added to Task Book in April 2009, when received information from JSC that Principal Investigator changed to Steven Platts, from Janice Meck, in FY2007. See Meck (Principal Investigator) for reports prior to FY2007.</p>
Bibliography Type:	<p>Description: (Last Updated: 03/01/2018)</p>