Find Function   Find Societ M Ph.D.     Project Title:   Characterization of Oxidative Damage During a Saturation Dive     Division Name:   Human Research     Program/Discipline:   HUMAN RESEARCH     Program/Discipline:   HUMAN RESEARCH-I-Biomedical contermosaures     Jaint Agency Name:   rechPort:   No     Human Research Program Riskes   None   Sone     Space Biology Element:   None   Space Biology Cross-Element     Division Name:   None   Fax:   FY 281-483-2888     PI Organization Type:   NASA CENTER   Phone:   281-483-7204     Organization Type:   NASA CENTER   Phone:   281-483-7204     Organization Same:   Sone-Gold Research and Environmental Sciences Division/SK3   Phone:   281-483-7204     PI Address 1:   Biomedical Research and Environmental Sciences Division/SK3   Phone:   281-483-7204     PI Address 1:   Biomedical Research and Environmental Sciences Division/SK3   Phone:   281-483-7204     PI Address 1:   Biomedical Research and Environmental Sciences Division/SK3   Phone:   281-483-7204     Pi Address 1:   Biomedical Research and Environmental Sciences Division/SK3   Phone:   281-48	Fiscal Year:	FY 2009	Task Last Updated:	FY 09/08/2009
Project Tills:   Characterization of Oxidative Damage During a Saturation Dive     Division Name:   Human Research     Program/Discipline:-   HUMAN RESEARCH     Program/Discipline:-   RUMAN RESEARCH-Biomedical countermeasures     Jaint Agency Name:   TechPort:   No     Human Research Program Elements:   ()IIIIC-Human Health Countermeasures   I     Human Research Program Riske:   None   I   I     Space Biology Cross-Element:   None   I   I     Space Biology Special Category:   None   I   I   I     Plonalitic State:   None   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I   I			Task Last Opuattu.	1109/00/2009
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Human Research Program Risks:NoneSpace Biology Element:NoneSpace Biology Special Category:NoneSpace Biology Special Category:NonePI Email:scott.msmith@masa.govFax:P1 Zemail:Scott.msmith@masa.govFax:P2 Ratil:NosoFax:P2 Ratil:Scott.msmith@masa.govFax:P2 Ratil:Scott.msmith@masa.govFax:P2 Ratil:NaSA CENTERPhone:P1 Address 1:Biomedical Research and Environmental Sciences Division/SK3Fax:P1 Address 2:2010 NASA PkoyFax:P1 Wab Page:Scott.msTXCity:HoustonState:P3 Godo:7058-3607Congressional District:26 Comments:Scott.msScott.msProjet Type:GROUNDSolicitation / Funding Scorte:GredeResearchNo. of Path Dec:No. of Path Dec:Solicitation / GredeResearchNo. of Path Dec:No. of Master' Degrees:Solicitation / GredeResearchNo. of Master's Candidates:No. of Master' Degrees:Solicitation / GredeResearchNo. of Bachelor's Candidates:No. of Master' Degrees:Solicitation / GredeResearchContact Email:Injec v mack@masa.govSolicitation / GredeResearchFight Arsignment:Solicitation gredeResearchSolicitation / GredeResearchContact Monitor:Meck, J@aContact Phone:SolicitationContact Email:Injec v mack@masa.govSolicitation / GredeResearchSolicitationContact M	Joint Agency Name:		TechPort:	No
Space Biology Element:   None     Space Biology Cross-Element Discipline:   None     Space Biology Special Category:   None     Space Biology Special Category:   None     PI Email:   acota manifo/masa gov   Fax: FY 281-483-2888     PI Organization Type:   NASA CENTER   Phone: 281-483-7204     Organization Name:   NASA Johnson Space Center   Phone: 281-483-7204     PI Address 1:   Biomedical Research and Environmental Sciences Division/SK3   Phone: 281-483-7204     PI Address 2:   2101 NASA Pkwy   State: TX     PI Address 2:   2101 NASA Pkwy   State: TX     Congressional District:   360   Congressional District: 36     Comments:   Gross-3607   Congressional District: 36     Comments:   State: TX   900/2010     No. of Post Docs:   Food Paddress:   Discreted Research     No. of PhD Candidates:   No. of Bachelor's Degrees:   No. of Bachelor's Degrees:     No. of Bachelor's Candidates:   Monitoring Center: NASA JSC   Contact Famil:   Salie Varte-Salie Salie	Human Research Program Elements:	(1) <b>HHC</b> :Human Health Countermeasures		
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PE Emails   geott m.smith/Gauss.acv   F.x:   F.Y 281-483-2888     PI Organization Type:   NASA CENTER   Phone:   281-483-7204     Organization Name:   NASA Johnson Space Center   281-483-7204     PI Address 1:   Biomedical Research and Environmental Sciences Division/SKJ   1     PI Address 2:   2101 NASA Pkwy   1     PI Web Page:   1   1     City:   Houston   State:   TX     Zip Code:   7058-3607   Congressional Distric:   36     Comments:   1   1001/2008   End Date:   000/2010     No. of Post Doce:   No. of Master' Degrees:   1   1     No. of Post Doce:   No. of Master' Degrees:   1   1     No. of Master' Scandidates:   No. of Master' Degrees:   1   1   1     No. of Bachelor's Candidates:   Monitoring Center:   NASA JSC   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1   1 <td< td=""><td></td><td>None</td><td></td><td></td></td<>		None		
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Practice NameNASA Johnson Space CenterPI Address 1:Biomedical Research and Environmental Sciences Division/SK3PI Address 2:2101 NASA PkwyPI Web Page:	PI Email:	scott.m.smith@nasa.gov	Fax:	FY 281-483-2888
PI Address 1:   Biomedical Research and Environmental Sciences Division/SK3     PI Address 2:   2101 NASA Pkwy     PI Web Page:	PI Organization Type:	NASA CENTER	Phone:	281-483-7204
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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:   Filight Assignment:     Key Personnel Changes/Previous PI:   Variation (USRA/NASA Johnson Space Center)     Gorant/Contract No.:   Directed Research     Performance Goal No.:   Directed Research     Performance Goal Text:   It is well understood that living in an environment with an increased partial pressure of oxygen will result in oxid damage to the body – this is supported by our published data from NEEMO (NASA Extreme Environment Miss	No. of Post Docs:		No. of PhD Degrees:	
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Contact Monitor:   Meck, J@n   Contact Phone: 281-244-5405     Contact Email:   janice.v.meck@nasa.gov     Flight Program:   Fight Assignment:     Flight Assignment:   Versonnel Changes/Previous PI:     COI Name (Institution):   Zwart, Sara (USRA/NASA Johnson Space Center ) Jessup, J. Milburn (NIH/National Cancer Institute/Cancer Diagnosis Program )     Grant/Contract No.:   Directed Research     Performance Goal No.:   It is well understood that living in an environment with an increased partial pressure of oxygen will result in oxi damage to the body – this is supported by our published data from NEEMO (NASA Extreme Environment Miss	No. of Master's Candidates:		No. of Bachelor's Degrees:	
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damage to the body – this is supported by our published data from NEEMO (NASA Extreme Environment Miss	Performance Goal Text:			
Task Description:long-duration space flight. In this study, we propose to expand the number of markers of oxidative damage mean the earlier NEEMO missions to better characterize observed effects, and to also include biomarkers suggested by National Cancer Institute and other members of the NIH at a joint NCI/NASA workshop on oxidative damage assessment. Additionally, markers of folate status and metabolism will be evaluated because they were affected earlier NEEMO and ISS crewmembers, possibly through a mechanism that relates to oxidative insult. Measurements will also include markers used to determine whether the increase in body iron storage during NE missions is due to destruction of red blood cells, which would be a mechanism similar to what happens during storage	Task Description:	damage to the body – this is supported by our Operations) V, XII, and XIII saturation dive r long-duration space flight. In this study, we p the earlier NEEMO missions to better charact National Cancer Institute and other members assessment. Additionally, markers of folate st earlier NEEMO and ISS crewmembers, possi Measurements will also include markers used	published data from NEEMO (NASA Ext nissions. Similar types of oxidative damag ropose to expand the number of markers o erize observed effects, and to also include of the NIH at a joint NCI/NASA workshop atus and metabolism will be evaluated bec bly through a mechanism that relates to ox to determine whether the increase in body	reme Environment Mission e are evident after f oxidative damage measured in biomarkers suggested by the o on oxidative damage ause they were affected in idative insult.

	flight. On the basis of numerous studies of subjects at different altitudes, we expect that neocytolysis occurs upon exposure to the increase in pressure; however, this has not been measured directly in the NEEMO model.
Rationale for HRP Directed Research:	
<b>Research Impact/Earth Benefits:</b>	
Task Progress:	New project for FY2009.
Bibliography Type:	Description: (Last Updated: 05/24/2023)